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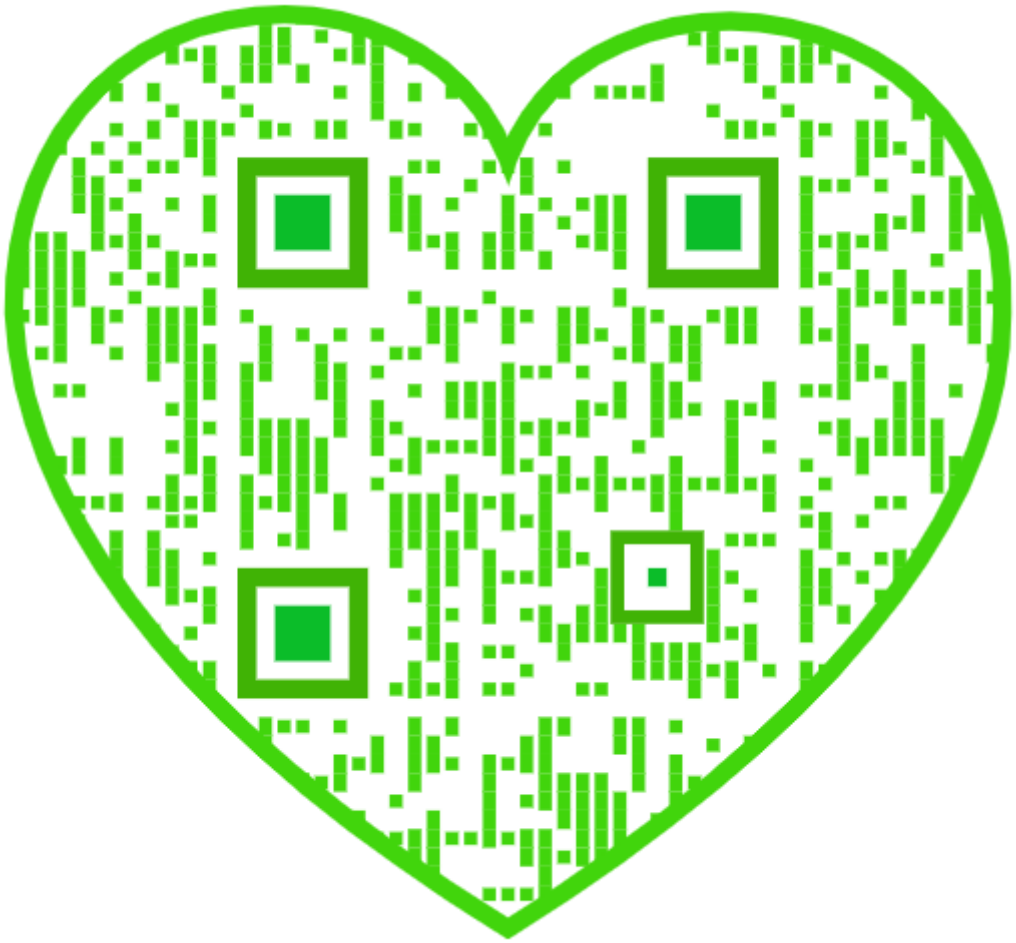
SCIENTIFIC HAT FINISHING *and* RENOVATING

Henry L. Ermatinger



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SCIENTIFIC
HAT FINISHING
and RENOVATING

SCIENTIFIC HAT FINISHING *and* RENOVATING

A complete and profusely illustrated course of instruction, enabling the novice to acquire the art of finishing and remodeling hats of all varieties according to tested and approved methods

By Henry L. Ermatinger, Hatter

PUBLISHED BY
ROBERTS, CUSHMAN & CO.
NEW YORK
1919

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PREFACE

IN publishing this book it has been our aim to give to hat finishers and renovators a text book such as has heretofore been possessed by practically every craft but that of hatting. While the need for such a book has been keenly realized, the jealousy with which the secrets of the trade have been guarded by those competent to teach them has been an insurmountable difficulty to overcome in the past.

The present volume, it is believed, is as complete and explicit as it is possible to make. "Scientific Hat Finishing and Renovating" is really a remarkable achievement. The reader will soon realize that it is more than a set of instructions—it is this, plus a running fire of confidential advice and counsel from a man who has been a practical hatter all his life and has learned the little shortcuts and economies that distinguish the expert from the beginner. If you need a cigar-box for pouncing paper and chalk he does not advise you to get a costly cabinet. Throughout the book there are hardheaded hints that will be of value to the hatter already established as well as to the man planning to open a shop.

Besides the satisfaction of filling a genuine need and helping to elevate the craft of hatting, we feel a

sentimental interest in sponsoring this book, for John Henry Ermatinger, father of the author, was one of our early customers and Mr. Ermatinger himself is still on our books as a regular purchaser. As far back as 1862 *John Henry Ermatinger was purchasing goods from us; and his son, the author of this book, has in his possession an old bill from us dated in that year.*

While we have made no endeavor to advertise our products in this book, we wish to call the reader's attention to the fact that all supplies mentioned may be obtained from us.

ROBERTS, CUSHMAN & CO.

New York,
February, 1919.

CONTENTS

INTRODUCTORY 1
FROM THE BUSINESS MAN'S POINT OF VIEW..... 5
ESTABLISHING THE SHOP..... 9
EQUIPPING AND ARRANGING THE SHOP..... 14
ADVERTISING AND BUSINESS SYSTEMS..... 20
WHAT TO CHARGE..... 25
HOW TO MAKE OUT A JOB TICKET..... 27
PREPARING THE HATS FOR CLEANING..... 29
CLEANING SOFT HATS..... 31
CLEANING SOFT HATS (CONT.)..... 37
STIFFENING AND BLOCKING..... 44
IRONING AND POUNCING..... 51
BRIM WORK (SOFT HATS)..... 57
CURLING SOFT HATS..... 64
FLANGING 69
RENOVATING VELOURS, BEAVERS AND NAPPED HATS 75
SHAPING SOFT HAT STYLES..... 77
HOW TO CONFORM A HAT..... 81
CLEANING STIFF HATS..... 88
BLOCKING STIFF HATS..... 93
CURLING STIFF HATS..... 97
FINISHING ROUGH HATS.....103
TRIMMING 109
CLEANING STRAWS AND BODY HATS.....112
BLEACHING STRAWS AND BODY HATS.....118
BLEACHING AND STIFFENING PANAMA HATS.....123
BLOCKING PANAMA HATS.....128
OTHER BLEACHING METHODS.....131
RENOVATING WOMEN'S STRAW HATS.....138
IRONING, WASHING AND BLOCKING SILK HATS....144

WE HAVE IT !

EVERY article of equipment or supply for hat finishing and renovating, mentioned in the following chapters, can be obtained from

Roberts, Cushman & Company

Executive Offices and Salesroom

10 Washington Place, New York City

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9 Washington Place
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Send for our illustrated catalogue

INTRODUCTORY

JOHN HENRY ERMATINGER, father of the author of this book was born in Shaffhausen, Switzerland, in 1827, and served his full apprenticeship, which in those years meant shaving the fur from the skins of hares and beavers with a razor, making the body with the old-fashioned bow, sizing and dyeing the different shades, blocking and finishing and curling by hand—in fact making the entire hat by hand from the rabbit to the wearer. From 1840 to 1850 his boss, John Wuescher, displayed his hats at the Exposition in Paris, making the Tour de France ten times, and in the last seven tours capturing the "Grand Prix" over all European competition. In 1848 John Henry received his card as a full-fledged journeyman hatter, and sailed to America. Upon his arrival he was shopped in the factory of Lee & Morris, on Staten Island, New York, where on the first day he was told that his work was too good, as the jobbers in New York would want them all like John Henry's, if they found one of that quality in the case. The new "Jour" was obliged to put on the brakes and adapt himself to the prevailing conditions. In 1849, one year after landing in America, he was offered the

superintendency of the factory by the president, Mr. Morris, but instead of availing himself of this opportunity the gold-fever took possession of him, and by way of the Isthmus of Panama and the Chagres River he arrived at the gold-fields of California in 1849.

In 1850 he sailed for the new gold diggings of Australia, and after prospecting for nine years, he again sailed, this time to South America. Several years of prospecting in Uruguay, Paraguay and Argentine, convinced him that a rolling stone gathers no moss, so he sought and found employment with an Italian, who was the proprietor of the leading hat establishment in Rio de Janeiro, Brazil, and also hatter to his majesty, Don Pedro III, emperor of Brazil.

In this establishment the workmanship of the globe-trotting hatter was highly appreciated—especially so by the emperor, who almost daily stepped in to have his silk hat ironed or blocked, and to converse with John Henry, who spoke seven languages. It was here that the senior Ermatinger learned the real Spanish method of bleaching Panama hats and fine Milan and split braid straws.

Thoroughly equipped to undertake anything in the hat line, he concluded again to sail for the United States, and in 1870 opened up a silk hat factory, and shop for the general renovating of men's and ladies' hats in St. Louis, Mo., where he succeeded in building up a lucrative establishment.

At the age of 14 years, the son, Henry L., started to learn the trade of his father. He served as an apprentice until he was 21 years of age. Five weeks later, on December 5, 1889, John Henry Ermatinger

passed away, and the son continued the business, and built up a reputation throughout the United States for the finest repair work on high-grade hats, including the bleaching of the finer grades of Panamas, Leghorns, Bangkoks, Milans and China and Belgium split-braids. He received repair work from all parts of the country, and many Panamas ranging from the $10 grades to the $150 Monte Cristi have been sent to him for bleaching once or twice a season continuously for eight of ten years, proving absolutely that no injurious acids were used in his work.

In 1910, at the age of 42, he retired from the business and made his residence on his orange and grapefruit grove near St. Petersburg, Fla., but after four years he found the inactivity irksome and re-entered his old business with his son, H. L. Ermatinger, Jr., opening a repair shop in St. Petersburg where he handles a large mail order business.

Henry L. Ermatinger has been the means of helping many to build up successful and remunerative businesses, and readers are urged to make the most of the opportunity, which is now offered to take advantage of authoritative instruction in a jealously guarded art, which has never before been put into print.

THE PUBLISHER.

SCIENTIFIC HAT FINISHING and RENOVATING

CHAPTER I

From the Business Man's Point of View

THIS book is intended primarily to give the reader a thorough instruction in the interesting and remunerative craft of Scientific Hat Finishing and Renovating, as indicated in the title. It must be remembered, however, that the hatter who opens a shop for the expert repairing and manufacture of hats is also a business man; he must follow the precepts of conduct of other men who have served the public successfully; he must possess a knowledge of bookkeeping and business arithmetic; he must know how to pick the most advantageous location; how to equip and furnish his shop, how to approach customers; and many an expert craftsman whose work was unimpeachable, has been brought upon the rocks because of ignorance or neglect of one of these details.

This chapter will be devoted to a few necessary suggestions developed from a life-long experience in this work—suggestions which must be considered and adopted before the beginner can open his shop with assurance of success.

Every man with experience in independent business life, who has had to cut a place for himself among competitors and build up a business from a small beginning, has found indispensable certain primary attributes of conduct.

Before his special capacities can be of use to him he must be industrious, patient, sober, polite, ingenious and honest. With these virtues and even a minimum of business acumen, you can have in a few years, by the conscientious study and practice of the methods described here, an establishment that will take care of yourself and family and assure you a comfortable income during your lifetime.

Have patience. It takes time to establish yourself in the confidence of the people of a town, but if you can clean and block a hat better than your competitor, and if you have the ambition to succeed, and the heart to work for success, nothing can prevent your having phenomenal success, except things over which we have no control. Each job you turn out should be perfect. If you make up your mind not to tolerate slighted work, your satisfied customers will talk about you and advertise you as nothing else can do. Every customer has his circle of friends, and they in turn have theirs, and if you learn your business and get a reputation for doing thorough, conscientious work your success is assured. Like an endless chain this gratuitous advertising from a pleased customer to his friends continues indefinitely, and in a few years you can ask the highest price for your labor and have the satisfaction of turning out nothing but the best work, and absolutely ignoring the cheap competition of bootblacks.

Be sober. No man in business can expect to succeed if he wastes time and money on liquor. All classes of people must be dealt with and many will refrain from patronizing a business man who goes on periodical sprees. And whether or not your customer has any prejudice in this direction he certainly will hesitate before entrusting you with a $5.00 felt hat, or a $10.00, or perhaps a $50.00, Panama hat, if it be known that you are a drinking man. Your lady customers particularly will be inclined to discontinue their patronage should you attempt to wait on them while under the influence of liquor.

Be polite. This is another great attribute, and the business man with the smile and cheery "good-morning" and "thank you, sir," and "call again," will succeed ahead of his competitor, who, although perhaps a better workman, is possessed with an ever-present grouch. Politeness is one of the greatest "trade-getters" in business.

Ingenuity and energy are also of vital importance. No ambitious business man should be afraid in his busy season to work ten or twelve hours a day when every hour he is coining money. The author's motto has always been to "make hay while the sun shines." For over twenty years, during the Panama season, he has labored sixteen and even eighteen hours a day, turning out from three to four dozen jobs a day, averaging $1.25 each, with the assistance of an apprentice and two hat trimmers (girls).

Honesty is one of the main essentials to success. Be honest to your trade, to yourself and to your help. Give your customers the best that is in you, and always do what you agreed to do. Never slight your

work nor turn the old ribbons inside out if you are being paid for new ones, as these small tricks will soon be discovered and will work untold injury to your business. Charge uniform prices to all excepting to the retail hatter, who, acting as your agent and sending you many hats during the month, is justly entitled to about 20 per cent. commission on all work sent. To your help be true but firm, according to your established rules. If they are efficient and are interested in your welfare, treat them with consideration and fairness, and you will be amply repaid. Be honest with yourself. You cannot work seven days in the week and continue to give your customers your best work. In your busiest season, when work piles up in spite of your utmost efforts during the week, it will seem as if you must work on Sunday. My advice is, don't do it. Get to your work an hour or two earlier in the morning, when you feel freshest and when there are fewer interruptions to continuous work. You will accomplish as much, if not more, than you would by working on the day provided for rest, and you will find that it agrees with you better. Rest and recreation on Sunday builds the nerve and tissue which keeps you going to the limit of your capacity.

The above principles have been formulated during a successful business career. I have found them as indispensable in the hat business as they are in the banking business or any other occupation or trade that throws men on their own resources and brings them into contact with their fellows.

CHAPTER II

Establishing the Shop

Choosing Your Work

FIRST decide just what the extent of your business will be. There are two kinds of hat renovating shops—three, in fact. You can make your living by repairing, renovating and remodeling only, or you can buy stiff and soft hat bodies in the rough and finish them in styles locally favored, displaying them in your window with a card—"Made to Order—Only $3.00"—thereby building up a retail business in connection with your renovating establishment, or you can sell the hats that you finish yourself to the local retailers.

Most hatters find it profitable to combine manufacturing in this small way with their repair work. This program has the advantage of giving the hatters some well-paying work to which to devote their time in what would ordinarily be the dull season for renovating work. The methods and processes for finishing hats from bodies in the rough will be fully described in detail in this series.

In deciding how best to dispose of the hats you turn out—whether to offer them at retail yourself or to sell them to the retailers in your locality—there are several things to consider. If you sell the hats at retail, you, of course, can get a higher price per hat. This proceeding, however, sometimes arouses the enmity of the retailers who might otherwise secure for

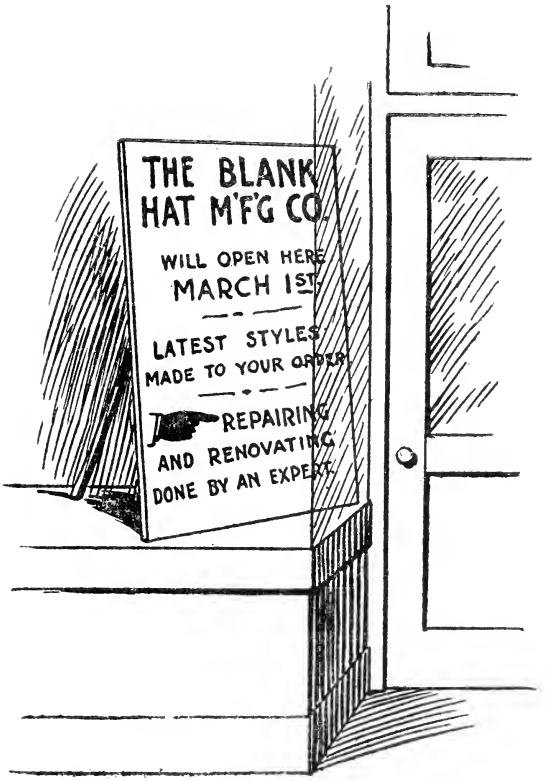
you a great deal of renovating work, though if you do good, reliable work, and there is no better man in the neighborhood, they probably will send you their renovates in spite of their disapproval of your competition.

Picking a Location

After you have decided what the scope of your business is to be you are ready for the first active step in the establishment of your shop—that of picking a location.

The things to look for are—a location on a main street, preferably near some large hotel or business block, a low rent, an attractive front if you can get it, and a three to five year lease. Of course a finishing and renovating shop cannot pay such a high rent as, for instance, a retail hat, shoe, clothing or furnishing goods store might pay. Nor is it necessary. Such a shop requires less space, a less attractive front, and need be less particular about its neighbors than the ordinary retail store. By careful search you can always find a small store on a good business street at a reasonable rental. In cases where a small store is not available, it is often advisable to rent a larger store and sublet one-half of it to a tailor, barber or some one else who will draw men to your neighborhood.

Give a week of your time to this most important step. Ascertain the rent on all the small, vacant stores on your main streets, take the list home with you and make careful comparisons. Some will have one advantage, some another. A modern front will be discounted by a high rent, a well-located store you will be unable to secure on a long enough lease to



make it a safe proposition, and so on. If you find it possible to save $10 to $25 a month, though at the expense of a modern, attractive front, I would advise you to take the place, provided it is in a favorable location and you can secure a three to five year lease. You can always have the front repainted in some lively color or even put in an entire new front if you have a long enough lease.

Heat, Light and Water

It is important that your store have running water and an abundance of natural light. The better the light the better your workmanship will be. A good supply of light also goes a long way toward making an inviting establishment. Running water is an essential, a great deal of water being used in doing first-class work.

If possible, have your shop connected with gas, which is useful both for lighting purposes and for heating your irons, bakers, sandbags and water. Gas is by far the best heat-producer and the steadiest for conforming stiff hats. If gas cannot be obtained you can get along with electricity by equipping yourself with an electric iron and stove, procurable from the hatters' supply houses. If neither gas nor electricity are available, or expedient, a two-burner gasoline stove will give good service, being far preferable to the old system of heating slugs in a coke fire.

Work in Front of the Store

In considering the various stores that come under your attention, choose a front that will allow you to have your finisher's bench where passers-by will be able to see you at work. If you intend to retail the hats you make you may display a few in the windows, but not enough to obstruct the view into the store. The best ad and the surest business-getter for the hat repairer is the sight of himself in his clean white apron using his skill on the felt and straw hats that are piled on the bench. You get 75 per cent. of your customers in this way. They pass your store, stop to watch you work—perhaps enter the store and

ask a question or two about the work. Then when their hats need repairing they think of the hatter in the window. Besides this, the front is usually the lightest part of the store, and strong natural daylight is necessary to good work. Also in the front of the store you are directly before your entering customer.

PRELIMINARY ADVERTISING

Just at this time—after the lease is closed, and while you are waiting for your front to be remodeled or your blocks, flanges and trimmings to arrive—a little press agent work is in order. Get the story in circulation that you are about to establish a hat factory. Have a sign painter make you an oil cloth or canvas sign to put in the window or over the store until you are ready to occupy it. Word it about as shown in the illustration. If your shop is to be in a small town, write out an item for the papers to the effect that a hat factory is about to be started.

Your purpose at this time, and, in fact, in all future publicity, should be to become known as a hat factory rather than a little renovating shop. It makes the venture appear larger and creates more interest, besides giving more confidence in your work to people who want repairing or renovating done. Get the people talking about the hat factory that is about to be started and the possibility that if it is successful it will give employment to some of the townspeople —even if the manufacturing is just to be an incidental part of your business to fill in your time profitably during dull seasons. Let the name of the business carry out this idea. Call yourself the ———— Hat Mfg. Co. Get established as a manufacturer.

CHAPTER III

Equipping and Arranging the Shop

IT is important that the renovator's and finisher's shop be intelligently arranged and equipped. In this there is more to consider than appearance—work will be greatly facilitated if the various departments are arranged consecutively.

The main finishing bench should be in the front of the store, for reasons already given. People stop and look, and your tricks with the iron and the luring pad come into their memory when their hats grow shabby.

The bench is primarily a counter or table on which you can do your work. It must be substantial and may be movable or a permanent fixture. In ordering it at the planing mill, or from a first-class carpenter or wood-worker, the only unusual feature to specify is a semi-circle, 8 inches long and 3 inches wide, which should be sawed out near the left-hand corner of the bench. This is an important feature, required in stiffening and finishing underbrims.

The bench top should be made of some good close-grained hard wood—a walnut top is best—and, of course, most expensive. A maple top costs less and is almost as serviceable. The top should be 6 feet long, 3 feet wide and 1¼ to 1½ inches thick, made of several boards, nicely dove-tailed together, and finished perfectly smooth. Woods containing turpentine—such as yellow pine—should not be used. Most hatters' supply houses carry finishing benches ready made.

The height of the bench will vary according to the

height of the man using it. It should be about 30 to 36 inches.

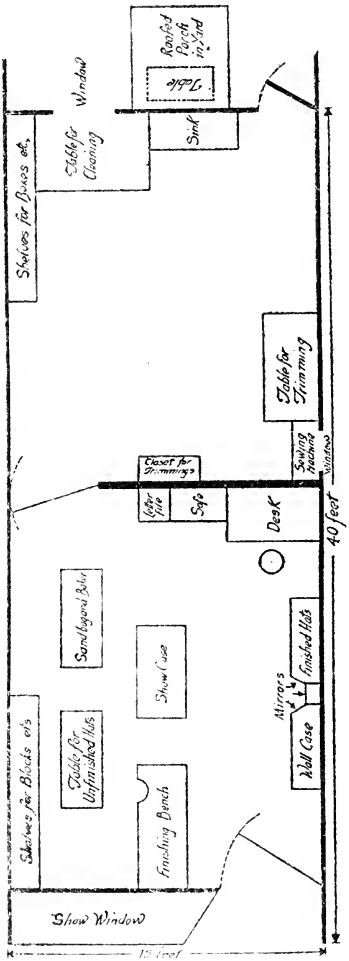
The necessary tools and appurtenances should be kept on the bench. These are: a small tub of water, in the far right-hand corner; a spinner, in the center; two finisher's sponges, one for light hats and one for dark; two lures, light and dark; a puller down; a runner down; curling tools, and a cigar box for pouncing paper, tacks, chalk and marking pencils. An inch railing around the back and sides will keep small tools from sliding off the bench.

One or two shelves might be put under the bench. for extra spinners, curling board, brim board, and such tools as are needed only occasionally. Your blocking cords should be kept always handy, on a long nail driven in the right-hand leg of the work bench.

System and cleanliness must be constantly observed. The bench should be thoroughly dusted every morning and the water changed regularly in the finisher's tub.

Directly behind or alongside your finishing bench you will want a row of shelves for your blocks and flanges, and, in fact, anything to be used in the course of your work, for which you have no room on your bench. Eight or ten boards, each ten feet long, ten inches wide and about one inch or three-quarters of an inch thick. These should be installed, one over the other, about eight inches apart, properly braced in the center.

On these you will keep blocks and flanges, etc. Have all the blocks and flanges assorted according to size and style; mark the size of each block on the edge of the board directly under the spot where it belongs, and always put it back after use. The staple shapes and



SUGGESTED GROUND-PLAN FOR A COMPLETE RENOVATING SHOP

blocks that you most use should, of course, be on the shelves most easily reached, where they are convenient to hand. Systematizing the arrangement of your blocks in this way will help considerably in the busy season.

Next to the rows of shelving, the flanging outfit should be arranged. For a while you can get along very nicely by flanging your brims by hand, but as your work increases it will be real economy to install the labor-saving devices that are provided for this purpose, such as the sand-bag and baker. It is best, therefore, to provide a space for this in the original arrangement, even if this part of the equipment is to be added later. The outfit can be purchased at a reasonable cost and will not occupy much space—say about five feet square. The equipment is explained in detail in a later chapter.

Near the finishing bench should be the trimmer's chair, table and sewing machine which latter must be near a window for light. These also may be dispensed with by the beginner, but will be essential if a business of any volume is to be handled. If you cannot afford a sewing machine at first, a tailor or dressmaker can usually be found who will sew bindings on hats for a small charge. Take an old hat and rip off the trimmings, carefully observing how each piece is sewn on. With the experience gained in this way, and with the information given in the chapter on trimming, to be printed later, you will be able to take care of this work yourself until your business justifies the employment of an expert trimmer or a woman handy with the needle.

An extra table 6 to 8 feet long is a necessity, as well as some light movable hat racks, holding about a dozen hats each, for yourself and the trimmer. Racks

with parallel bars are preferable, on which the hats may be rested crown down, with the trimmings placed inside, convenient for your trimmer. These may be lifted and carried from place to place, making them more convenient than the racks on rollers.

A wall case is the preferable place to keep finished work. Here it is convenient, safe and makes a good appearance. If this seems too expensive, however, the hats may be kept in large empty straw hat boxes, procured from the retailers—perhaps three or six hats to a box. This will keep the hats clean until they are called for. A ring should be placed between each, and the customer's name written on the outside of the box. Felt hats and Panamas should be kept in separate boxes.

Trimmings should be kept under lock and key, and for this a closet should be built if the permanent fixtures of the store do not include one.

A desk for personal use, and a file for your correspondence—for keeping in touch with supply houses and customers will entail quite a volume of letter-writing—will complete the furniture of the store.

In the yard outside, a rainproof roof should be put up, large enough to thoroughly protect your self and your work while cleaning with gasoline. A table for cleaning should be kept under this roof.

The best arrangement, if you plan to employ a helper of some sort—an apprentice or a trimmer—is to divide the store into a front shop and back shop by means of a partition. In the front shop have your finishing bench, with its accessories, including the sand-bag and baker; in the back your gasoline and all the appurtenances for cleaning and washing. The trimming may

also be done in this room. There should be no stove of any kind here, owing to the danger from gasoline fumes when the hats are cleaned indoors in cold or rainy weather. The only safe light in the back shop is an incandescent electric light. By doing the cleaning next to a rear window you may do away with artificial light altogether. The danger of heat and flame in a room where gasoline is used cannot be too often mentioned. A stray match or a careless smoker may cause fatal results at any time.

CHAPTER IV

Advertising and Business Systems

YOUR shop opened, you face the problems of getting business, of carrying it on without confusion, and of keeping yourself above water financially.

Getting Work by Personal Calls.

Personal solicitation is the best plan for getting business immediately. Spend a few hours each day visiting the homes and business offices in your neighborhood, showing a sample of your work compared with a hat that needs repairing, and leaving your business card at each call. In a few weeks it will pay you to get a solicitor to secure orders on a 20 per cent. commission basis, he to deliver and collect for each job.

Hat Stores and Departments a Source of Income

A quantity of work can be secured from retail stores, both exclusive hatters and hat departments. Call in person upon the managers, and offer them 20 per cent. commission on all cleaning and blocking jobs they can turn over to you. Their relations with the customer put them in a position to get a great deal of this work. In addition to this you can serve them by making new hats to order, conforming derby and stiff straws and remodeling their old stock into salable shapes. If you let it be known that you are equipped to make hats in unusual sizes—smaller than 6¾, and larger than 7⅜—the stores will be glad to take orders for you for the sake of satisfying their hard-to-fit customers. Remod-

eling work for the retailers requires that you be familiar with the latest shapes and style tendencies, and for this I would recommend a careful inspection of the pages of THE AMERICAN HATTER each month. The charge to the retailer for altering old stock should be from $6 to $12 per dozen, according to the amount of work involved. Practically all of this is clear profit to yourself. Your terms can be either cash or delivery of job or payment by the month.

BEST FORMS OF ADVERTISING.

Your local newspaper is the best medium when you decide to break into publicity. If nothing else, you can afford a small ad in the Sunday issue. I have found the following form effective, inserted in the want columns:

> Wanted—1000 men to have their old hats made new. Panama and straw hat bleaching a specialty. Workmanship guaranteed. Mail orders solicited. The Blank Hat Mfg. Co., 1612 Main St.

As the business expands a street car ad, and later a trial at bill-board advertising will prove profitable. If possible install a telephone, and your ad in the classified trades column of the phone directory, offering to call for and deliver work, will keep your business before a desirable class of people. Compile a list of business and professional men from the city directory or phone book, and address them a personal letter, brief and well-worded. A letter like the one shown on the next page can be turned out by a copying or fac-simile printing company in quantities at a very nominal sum.

Your window should be one of your best advertisements. Display an old hat—not so old as to make it ridiculous—but one that shows plainly the effect of grease, wear and handling. Beside it show one of the same shape and color that you have recently repaired. Put a card below each hat—*"Before Cleaning"*—and *"After Cleaning."* This is the simplest, strongest argu-

THE BLANK HAT MFG. CO.

MANUFACTURERS RENOVATORS

612 MAIN STREET

April 3, 1916.

Mr. J. H. Smith,
812 Main Street

Dear Sir:

Have you an old hat, but a good one -- too good to throw away? A fine felt that needs renovating and blocking, a silk hat that requires brushing up, or a first grade Panama that you would like bleached if you could find an expert to do the work right?

Let us show you what hatters can do

We make hats and we respect them. We can promise you superior work.

Yours very truly,
THE BLANK HAT MFG. CO.

A FACSIMILE COMPANY CAN TURN OUT LETTERS LIKE THIS IN THOUSANDS LOTS AT A LOW RATE

ment for your work that you can devise. The same display during the summer season, with a Panama or yacht straw in the window, will be equally effective. It is best to change the display as often as possible, showing each time a hat of different shape or color. Otherwise the same old hat day after day will soon be too familiar to get a glance from passers-by. Do not imitate the "bootblack renovator," who covers one-half of a straw with a cheap sulphur wash and the other with shoe polish, and puts it in his window as a sample of work. That procedure smacks of fraud and deception, and is suitable only to the kind of workers who commonly make use of it.

Mail Orders

One of the most natural fields for expansion is the mail order business. This business, with the assistance of the parcels post, is extremely profitable and constantly increases once it is established. Make it plain in your advertising that you invite orders by mail, and keep in touch with your out-of-town trade by addressing them an occasional circular or personal letter. The phone books of adjacent towns will supply a useful list of names for circularizing. Always send your work out C. O. D., unless the order was accompanied by cash.

Business Systems

Bookkeeping is a necessary department of the business. If you are not acquainted with single or double-entry, devise a simple system of your own whereby you can keep track of each day's business—your daily expenditures as well as cash received for work delivered. An ordinary day-book will suffice for this pur-

pose. At the end of the month enter your expenditures and cash received during the period under itemized columns in a ledger. Also keep a record under "credits" of the few charge accounts which will be necessary if you do much work for neighboring retailers, giving each hatter a separate column of account. These records will enable you to compare each month's business with the preceding one.

Aside from the accounts of the responsible retail hat dealers and perhaps a few business or professional men of good reputation, make it your purpose to do a strictly cash business. This applies not only to your dealings with customers, but also with those from whom you buy. Pay for your trimmings and supplies as you go along, and when you receive 10 to 30 days' dating, pay within that time.

Above all, be sure to lay aside enough in your busy season to insure you through the months when trade is slack. Many a man, depending upon hat renovating for a living—particularly when doing business in the North, where the winters are long and severe—has run on the rocks through disregard of this advice. Money will roll in in spring and summer, your busy seasons. When the snow flies, and caps and ear-muffs hold sway, business in the hat repair shop is practically at a standstill, and even the new stocks that you make up from the rough hats in your spare time, will not bring you any immediate income. There is only one safe course—in the prosperous months of spring and summer, lay aside $20 to $30 a week, to be used in the dull season. Then you will not need to look forward with apprehension to the almost certain let-up in trade during the cold weather.

CHAPTER V

What to Charge
How to Make Out A Job Ticket
Preparing the Hats for Cleaning

"WHAT do you charge to clean a hat?" will be your customer's first question.

Your answer will depend on a number of conditions. You must first learn how much work is necessary, if new trimmings are required, and if so, what quality. In the case of a Panama you must explain the advantage of the best bleach, and also the extra work required and consequently a higher price.

You should have two prices, one for ordinary hats and another for high-priced hats, and use two grades of trimming.

On soft or stiff felt hats retailing for $3.00 and under your prices will be about as follows:

Blocked only	$0.50
Cleaned and blocked	.75
New band (extra)	.25
New binding (extra)	.25
New leather (extra)	.25

On $3.50 to $5.00 hats charge 75 cents to block only, $1 to clean and block, and 25 cents extra for each trimming. On these, of course, you can put in more careful work and use a better quality of trimmings.

On straw hats charge as follows:

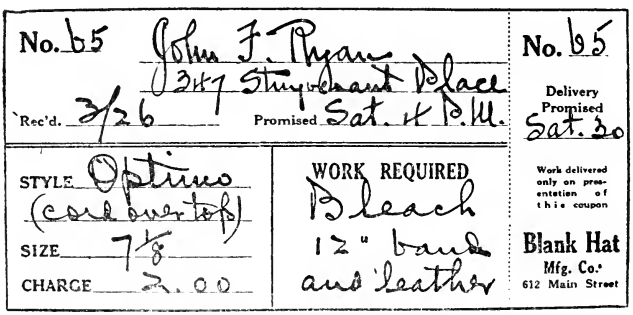
Cleaned and blocked	$0.50
Bleached and blocked	.75

New band (extra)..... .25
New leather (extra)..... .25

The bleaching is far more satisfactory than cleaning, and you should make an effort to have every customer allow you to bleach his hat.

For work on Panamas, the charge properly should vary according to the grade of the hat, since the responsibility is far greater when working on fine hats. But until you become expert enough to distinguish between a hat worth from $5 to $10, and one valued at $25 to $100, you will have to charge one price to all—$1.50 to bleach and block, and 25 cents extra for each new trimming. When you learn to distinguish a very fine hat, you can charge double price for work on those grades.

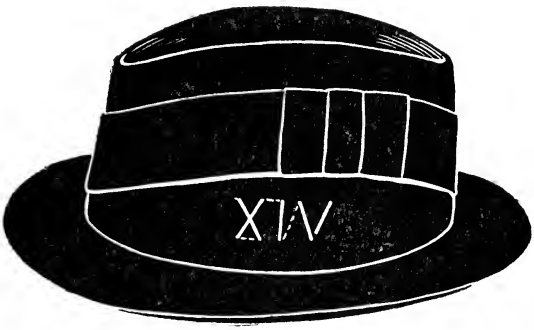
All prices quoted here are top prices and perhaps cannot be asked by a man in a small town who is not thoroughly expert. A man with an established business in a big city should easily secure the prices given, however. Good work soon becomes known, and a top-notcher with little competition can keep up his prices



THE JOB TICKET FILLED OUT

with the assurance that eventually he will get all the worth-while trade, and that even the bargain hunters will come to him and pay his price when they want good work done.

Never neglect to emphasize to all Panama customers

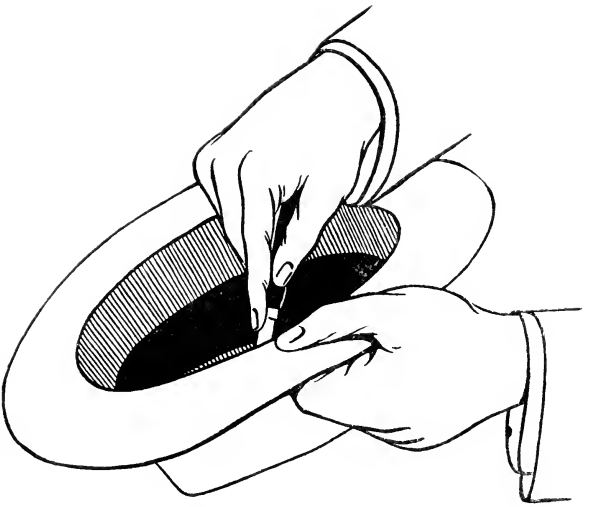


THE JOB NUMBER SEWN IN WITH THREAD

that these hats should always be bleached with sulphur fumes in an airtight box, and that those pretending to clean them for less than you charge will generally be found to use oxalic acid, which burns up the fiber.

After the price has been agreed upon, proceed to make your record on the job ticket. This is a form printed on flexible card, which is kept with the hat while the work is in progress, and used to identify the job when the customer calls for it. One end is perforated, so that it may be torn off. When work is left, the customer receives this coupon, to be used in calling for the work.

Number your ticket and the customer's tag, using the next highest number after the last job received. Fill in the customer's name (with initials) and ad-



REMOVING THE TRIMMINGS

dress. Put down the date in the correct space, so that you will know how long the work has been in the shop. Learn when the hat is wanted, and put this down on both tickets, which gives the customer a memorandum of when he is to call. Learn what style the finished hat is to be, and make a record of it. Put down the size, first finding out if the size is correct as it is, or if it needs stretching. A hat that is brought you after laying aside in a wardrobe for a season will often be found to have shrunk from its original size. Have the customer try on the hat in your presence, and learn if the size is correct. Put down the price that you have quoted for the job. Write in the proper space exactly what work is wanted—whether blocked,

cleaned, trimmed, etc. Then tear off the coupon for the customer and put your record ticket in the hat under the leather.

These tickets should be kept together on your bench as you will need to refer to them for each job as it comes up for your finishing work. As each hat is finished and ready for the trimmer, the ticket should be placed inside so that she will know what work is wanted. Then when the completed hat comes from her hand ready for the customer, the ticket should be placed under the leather so that the number is visible at a glance when the hat is picked up. After the hat is delivered it is well to keep the tickets for a time in your letter file, if you have one, or if not in a box for the purpose where they can be arranged in alphabetical order according to names.

When enough hats have been taken in to make it worth your while to put them in the cleaning bath they must be numbered and prepared for the bath. First mark the exact center with a piece of white chalk on the underbrim of each hat, to be referred to later when the hat is being blocked. This point will be found where the sweat leather joins together. Then raise the outside band and with a strong, double cotton thread sew in the number of the hat for identification. For this it is better to use Roman numerals (I, II, III, IV, etc.), as straight line figures can be made in much less time.

After the entire lot is numbered, proceed to rip the trimmings from the hat with a sharp pen-knife, being cautious to cut the threads only and not to injure the hat nor the trimmings you intend to save. When band or leather is to be used over again, according to

the customer's request, they should be pinned together or put in an envelope and marked, so that they may be easily found when the hats are ready to trim.

In some cases, when the trimmings are stained and greasy, they may be left on the hat, and a good brushing with gasoline while you are cleaning the hat will improve their appearance wonderfully.

CHAPTER VI

Cleaning Soft Hats

Preparatory Work—Removing Special Stains

THE hats are now numbered, ripped (as the removal of the trimmings is called) and all old threads and stitches are removed.

The first step toward actually cleaning the felt is to sort the hats into two lots, one composed of light colors and one of dark colors. This is essential, as light and dark felt hats cannot be successfully cleaned together. Put into one lot the white, pearl, cream, belly nutria, side nutria, back nutria, steel and light shades of brown; in the other lot dark brown, blue, green and black. These two lots must be kept separate during the entire cleaning process.

Ninety-seven per cent. of the hats brought in to be cleaned will present no worse problems than grease spots or perspiration stains, easily removed with gasoline. Other stains requiring special treatment will be encountered occasionally, however, and the careful worker will examine each hat separately and carefully. Weeks may elapse before you come across such marks as blood stains, paint or varnish spots, tar, rust, fruit or wine stains or dye stains from contact with cheap printed cloth or bunting. Nevertheless, such marks occur frequently and the worker who undertakes to clean them must be familiar with the methods of removing them.

It may be mentioned here that in applying chemicals

FOR SMALL STAINS, A SPOTTING PENCIL IS USEFUL

to small stains a spotting pencil will be useful, permitting finer work and saving the necessity for getting chemicals on the hands. A spotting pencil can be made by pointing a small stick of wood like a pencil, or it can be bought at any supply house. The pencil can be dipped into the bottle and applied to the spot until it is thoroughly wet, when scraping with the back of a knife and a sponge with clear water will generally remove it. For large spots the solution is poured into a saucer and applied with a toothbrush or nailbrush. It is not necessary to have separate brushes for each solution, as the brush can be thoroughly washed in several changes of clear water and dried after each use.

When using cyanide of potassium, permanganate of potash and the various chemicals recommended, it is advisable to put on a pair of loose-fitting rubber gloves

until spotting and bleaching is completed; then thoroughly rinse both the article bleached and the rubber gloves, being careful not to wet the inside of the gloves. When spotting pencil is used on small spots, gloves are unnecessary. It is best to have the various solutions ready mixed in well-corked bottles, glass stoppers being preferred.

Removing Egg, Milk or Blood Stains

For egg, milk or blood stains a brisk brushing with the penetrating brush is often sufficient. If this fails, apply cold water to the stain with a sponge, keeping the spot wet for five or ten minutes, then sponge with weak ammonia—now try it with your finger nail or knife, to see if it is dissolved. If not, owing to the age of the stain, wet the spot for another ten or fifteen minutes. When dissolved, take your bone scraper —the back of a table knife will do—and rub vigorously, one way with the nap, following with moist sponge and with the penetrating brush until the stain disappears. Dry thoroughly before placing the hat in the regular gasoline bath, which will be described later.

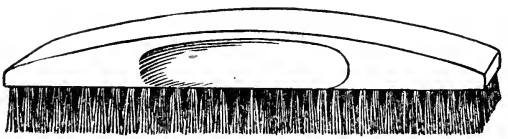
If described process fails to do the work dissolve one teaspoonful of soap bark in one-half cup of cold water, add twenty drops of ammonia and brush the spots with this solution, using a toothbrush or nail-brush. After brushing for a few minutes wash the spot thoroughly with clear water, removing all the soap bark, then keep it wet with a 2 per cent. solution of pepsin for a half hour or forty-five minutes. Wash out with plenty of clear water and let the hat thoroughly dry. If these spots are on an old soiled hat that also requires a thorough dry cleaning, be sure

that the hat is absolutely dry before placing it in the gasoline.

Never apply alcohol to stains of this nature.

PAINT, VARNISH AND TAR

For paint, varnish and tar stains, apply turpentine freely for ten minutes, after which alternate applications of wood alcohol or denatured alcohol and scraping with the bone scraper or knife will dissolve the stains. Finish with the penetrating brush. In this case it is not necessary to dry the hat as the gasoline



PENETRATING BRUSH

bath will remove all traces of the stain. Fresh paint stains can often be removed in the gasoline bath, without the preliminary treatment.

VEGETABLE STAINS

For fruit, wine, jelly and coffee stains, rub with a tooth or nailbrush dipped in cold water, and apply a weak solution—about 5 per cent.—of peroxide of hydrogen until stain disappears. Grass stains are removed by applying ether. Glue, mucilage, syrup and candy spots are removed with warm water, drying the hat before immersing in the gasoline bath.

INK, DYE AND RUST

For ink spots use a 10 per cent. solution of cyanide of potassium, which is very poisonous, but very effective. If this cannot be used, a saturate solution of

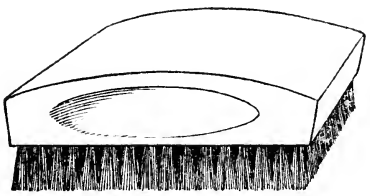
oxalic acid will do almost as well. An easy method is to wet the spot, then cover it with oxalic acid crystals, and pour hot water drop by drop upon the crystals until they gradually dissolve. When the spot disappears, wash in clear water. If the stains cannot be removed by this treatment, the following combination of oxalic acid and acetic acid will do the work. Take 4 ounces of 10 per cent. acetic acid, add all the oxalic acid it will dissolve (making a saturate solution), then add 1 ounce alcohol and brush this solution over the spots with a nailbrush or toothbrush. Rub your fingernail or scraper over the spot, and if removed wash out thoroughly with clear water. Dye stains, such as the drippings from cheap bunting after a rain, will yield to a solution of permanganate of potash followed by hydrogen peroxide. This treatment, which has a bleaching tendency, can only be used on Panamas, straws and white felts. Rust, iron and metallic stains can be removed by applying a saturate solution of oxalic acid, afterwards sponging off with warm water.

How to Clean Greasy Hats

The stains enumerated above are some of the occasional problems you will meet. They should be treated before the hat enters the gasoline bath or the straw or Panama enters the bleach, as the general cleaning removes the various odors and prevents the formation of rings and circles. As a rule, however, the hats will show nothing more than grease spots and perspiration stains, which only require to be treated with gasoline.

Preparatory Bath for Badly Stained Hats

Remove the very greasy hats from each lot and give them a preparatory bath in the following manner:



SCOURING BRUSH

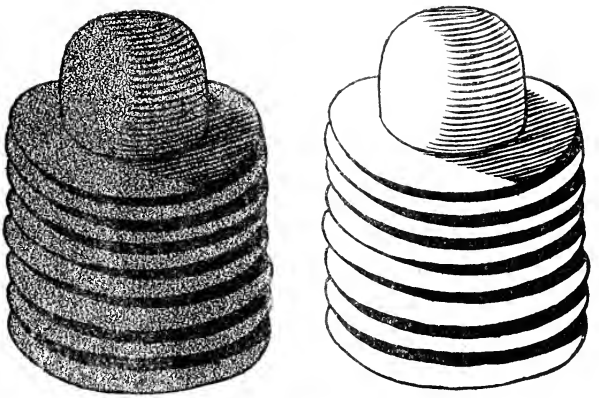
Pour a gallon of gasoline—use only gasoline testing 76 per cent. proof, or over—in a large wash basin, enamel ware preferred. Immerse the greasiest of the lot for a minute, then with your scouring brush, which should not be too stiff, brush the grease stains firmly and vigorously, often dipping your brush in the gasoline. Always hold the brush firmly in your right hand and rub away from you—that is, with the nap of the hat as it lays on the palm of your left hand. On the very greasy hats two or three minutes may be spent in this way. Slightly soiled hats do not require such treatment.

CHAPTER VII

Cleaning Soft Hats (Continued)

The Gasoline Bath for All Soiled Hats

AFTER the preparatory bath, all conspicuous stains being now removed, place the greasiest light-colored soft hat on your cleaning board or table, flat on the brim and stack the less greasy light-colored soft hats over the bottom hat until the least soiled hat is on top. Then stack up the black or dark-colored soft hats in like manner, leaving you two stacks or lots of hats, one lot of light colors, and one of dark colors. Then force the top hats down over the others until the crowns are in one another, thereby making two compact piles or bales. Place each pile in a separate small round wash boiler and pour five gallons of



LIGHT AND DARK HATS STACKED FOR THE CLEANING BATH

gasoline in each boiler, the light hats being placed in one boiler and the dark ones in the other.

If you should have a few greasy Panamas in the lot, you can stack them with the light-colored soft hats, but be sure to place them on top to prevent crushing and perhaps breaking the fibre, always first removing the perspiration stains in the preparatory bath, as you do with felt hats.

This work should be all performed in the two hours preceding your closing time. When your hats are placed in the boilers, put the lids on tightly to prevent the evaporation of gasoline, and carry them out to your outside shed or gasoline closet, which should be under lock and key, and let them soak over night.

If you have no facilities to build an outside shed, place the boilers in a safe corner of your shop, away from matches, stores or lights of any kind, but if you possibly can, build an outside gasoline shop for your own protection as well as to comply with the regulations of the insurance companies.

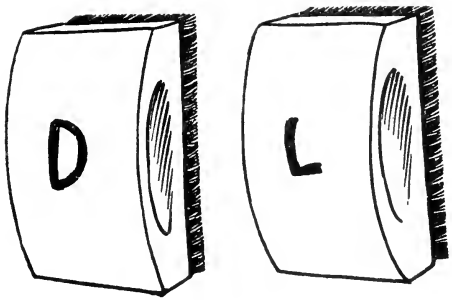
If the operator does not possess better facilities, means might be rigged up for holding the cans outside the window sill or they might be placed satisfactorily in the cellar.

Your hats having been soaked in gasoline over night, you should arrange, immediately after opening your shop in the morning, to give them a general cleaning. Do this even before you sweep out or build your fires.

Gasoline Precautions

In working with gasoline there are several precautions you must bear in mind, ignorance or neglect of

which has brought many a man into trouble. As you know, if you bring gasoline into contact with fire it will probably explode, setting fire to the shop and doing you personal injury. Gasoline fumes are almost as inflammable as the liquid itself. The best place to do your cleaning is in a yard or a rear porch under a roof. If such a place is not to be had, or if the weather prevents your using it, you will be obliged to do the work in the rear of your shop. Locate yourself near an open window. Make a rule, and keep it,



THE BRUSHES FOR DARK AND LIGHT HATS MUST BE PLAINLY MARKED

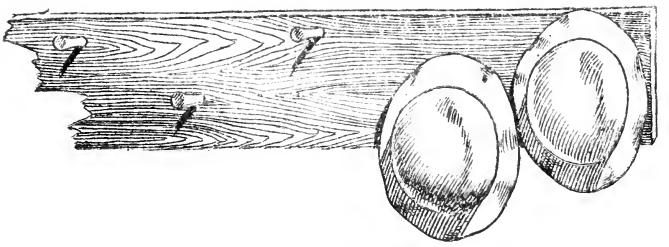
that no smokers shall be permitted to approach you. Extinguish all lights and fires, and before relighting, open the doors and windows in front and rear, making a draft that will carry away the fumes.

In cleaning hats with gasoline, the back of the hands and the underside of the arm will sometimes become badly inflamed, as in a case of sunburn, after long contact with the gasoline. Cold cream rubbed on the affected parts will give instant relief.

Having attended to all precautions, put on an oil-

cloth apron of double thickness to prevent soiling your clothes and start cleaning the hats.

The ten or twelve hours' soaking will help wonderfully to dissolve all the grease and perspiration in the hats. Pour 1½ gallons of gasoline into a basin, leaving the hats in the five-gallon can as long as possible. Always clean the light hats first. Take the top hat—which should be the least soiled—from the five-gallon can (all the rest of the hats remaining in the large can until their turn) and filling your scouring brush with gasoline, brush the hat *with the nap,* holding it over the basin, and immersing the hat and brush frequently. Brush and clean the crown thoroughly, then the underbrim and finally the upperbrim. Then hang the hat on a peg above your basin, so that you may catch the drippings, and proceed in like manner on hat No. 2 and so on until you come to the bottom or more greasy hats, when your brushing should become more vigorous. Around the band mark where the greasy perspiration marks are most pronounced you may brush to and fro, remembering that the more vigorously you brush the more certain you are that all the perspiration and grease spots have disappeared and will not reappear after the hat has been blocked and finished. After cleaning each hat hang it on the peg until it is through dripping, after which it should be hung on a separate peg, where it can partially dry. If convenient, you may place it in the sunshine for five or ten minutes—not longer, because a complete drying is not yet desirable. A row of pegs should be provided where you do your cleaning. These should be about 7 feet from the ground, and the pegs should be 10 inches in length and spaced one foot apart.



AT LEAST TWENTY OF THESE PEGS SHOULD BE PROVIDED NEAR YOUR CLEANING BENCH

They should be at least 20 in number. If space is limited, the pegs may be alternated, as shown in the illustration.

Preserving Used Gasoline

When you are through with the gasoline in your basin, pour it into a separate five-gallon can with a tight lid, the can being used exclusively to settle your used gasoline, and after the dirt is settled on the bottom you may either syphon or gently pour off the clear gasoline and use it over again, pouring the sediment away. Gasoline treated in this manner can be used three or four times for light hats and continuously for dark hats. Do not use soaps in your gasoline unless you desire to use some of the French Dry Cleaning soaps, which have a tendency to improve the work on very delicate colors and especially on ladies' silk, beaver, plush and velvet hats. When soaps are used the hats must always be thoroughly rinsed afterwards in clear gasoline, free from soap.

How to Warm Gasoline

If the weather is cold it is desirable to heat the gasoline to overcome the discomfort of working with

the hands in cold gasoline. In fact, it is preferable to heat the gasoline in summer, as well as winter, because hot gasoline is a more effective cleaner. The most pronounced cases of dirt and grease will yield to hot gasoline and vigorous brushing.

Place the can in a small boiler or tub containing about two gallons of boiling water, *which should be carried away from your heating apparatus before placing the can therein.* Leave the can of gasoline in the hot water for ten minutes. If cold weather you will find this treatment makes the work far more pleasant and the results more effective. Again let me caution you to do this and all other work away from any stove or blaze while the gasoline is exposed.

After the sunshine has *partly* dried your hats and your scouring brush is *almost* dry give them the last brushing. The hats under no circumstances should be absolutely dry for the last brushing. Brush the hats one way, excepting the very greasy ones, which should be vigorously brushed back and forth to create friction, which will cause the remaining grease or perspiration to disappear, through evaporation.

Now place the hats in the sunshine again for complete drying, or hang up for several hours. Do not attempt to block or finish them until *thoroughly* dry. If you place your hats in the open for drying, be sure that no soot is falling from nearby chimneys. If there is danger of their being soiled in this way it is better to dry them indoors, although it may take a few hours longer. If your delicate-colored hats should accidentally become marked in this way, first try to blow the spots off, and if this is not successful rub gently with the nap with a clean rubber eraser.

Cleaning Soft Hats

When you have cleaned all the light-colored hats treat the dark hats in the same manner. *Have a separate brush for the dark hats,* marking the brushes so that they are easily distinguished. A mistake in the case of a light hat will invariably mean doing the hat over again.

Sometimes, after the hat is dry, a white mark remains, resembling a salt stain. This is due to the alkaline nature of the perspiration, and when dry can be removed by brushing hard with the penetrating brush and sponging with a moist sponge applied to the hat iron and brushed quickly over the stain.

Cleaning Trimmed Hats

As stated before, many hats, both stiff and soft, may be cleaned without removing the trimmings, especially if they are of good quality. These hats should be cleaned first and the bands given a good brushing while they are on the hat, using gasoline liberally on your brush. You will soon become so expert that the bands and bindings that go through your hands will look like new, except where they are worn and frayed. If the color is conspicuously faded the trimmings can be turned inside out. When the trimmings are in bad condition, however, it is best to persuade the customer to pay for new ones.

CHAPTER VIII

Stiffening and Blocking

BEFORE blocking the hats cleaned in our last chapter, assort them to ascertain which require stiffening. Not more than one in ten will need to be stiffened, as with a hat in an ordinary condition of repair a wet sponge over the felt when on the blocks and a hot iron in finishing brings up the original stiffening.

Take one ounce of gum tragacanth and dissolve in a two quart enamel basin in one quart of water, putting a lid on the basin and standing it aside for two or three days to dissolve. On the third day, strain through cheese cloth, crushing the soft lumps between your fingers until the whole substance is of the consistency of molasses. This solution can be used for weeks, because it need only be used on a small percentage of the hats.

Stiffening the Hats

Take the hats that require stiffening, turn them inside out and pull them down over any block that will fit into them easily. Then with a short haired stencil brush or a sponge, apply the gum to the hat, pounding and rubbing it vigorously with the palm of your hands until the surface is clear and smooth and the gum is pounded thoroughly into the body of the hat. If wet spots appear on the outside of the hat, it indicates that the gum is too thin. It can be thickened by boiling

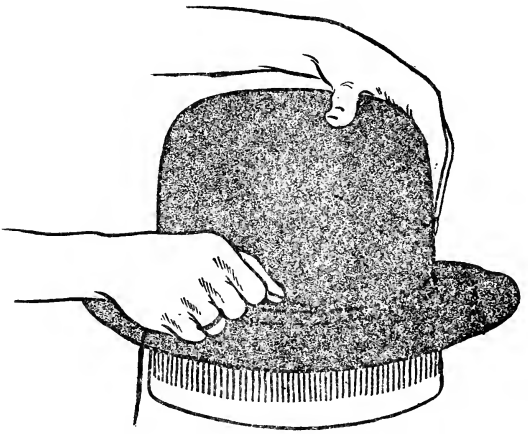
for about ten minutes. It must be cold when applied, however.

Stiffening with Shellac

Should some of your trade ask for a still stiffer or "board" brim, you can produce it in the following manner: Buy some dissolved orange shellac from a hatters' supply house—or buy some orange shellac at a drug store and dissolve it in a mason jar by covering the shellac with wood (or denatured) alcohol, occasionally shaking the jar during the day until the shellac has thoroughly dissolved. It is important, by the way, that the shellac should be of the proper consistency. It is safer to make it very thin, so as to be sure that the felt will not come up too stiff or "boardy." Pour some of the dissolved shellac out in a saucer and add equal parts of denatured alcohol, so that the mixture is of the consistency of rich milk.

Shellac should always be applied to the *inside* and *upper* brim of the hat. For applying the solution, a sponge should be bought new, and kept for this purpose only, in a covered jar of alcohol, to prevent hardening.

Turn the hat inside out and put it firmly on the block. Saturate your sponge with the prepared solution. Then commencing at the bottom, where the chalk mark indicates the back of the hat, apply the shellac with a long stroke and a gentle pressure, increasing the pressure as you proceed, until the top and center of the crown is reached. Be careful not to go over the same spot twice, as this would make the hat stiffen in that spot more than elsewhere, and the object is to make the stiffening uniform.



PULL THE CORD TIGHT AROUND THE HAT, ½ INCH ABOVE THE BAND-MARK

Now turn the hat back again, lay the brim in the semi-circle of your bench, and repeat the stiffening process on the underbrim, which should be slightly stiffer than the crown. After the shellac has thoroughly worked into the underbrim, it should be gently patted and brushed with the penetrating brush from the band mark out toward the edge of the brim, to stretch the nap. Patting or pounding with the palm of the hand is unnecessary.

If not as stiff as desired, when dry, repeat the operation again, remembering that if the shellac is not applied evenly, the brim when dry and finished will be stiffer in some places than others. The third or fourth experience in using shellac for stiffening purposes will make you quite proficient.

After the hat is thoroughly dry, following the stiffening, brush it vigorously with a hard, dry sponge to clear up the nap or surface of the felt.

Shellac stiffening should only be applied to hats requiring extra stout brims, such as the broad brimmed hats used by cattlemen and military men. In the ordinary soft hat the thing desired is to turn out a hat that is soft and mellow, and if stiffening is needed for these, gum tragacanth should be used.

A Word on Hatters' Sponges

A word here in regard to the quality of sponges to be used for work on hats may not be amiss. When a sponge is specified, the ordinary soft bath sponge, such as the general public is familiar with will not do. A close, tight sponge is required—the kind that is used in hat factories and that may be obtained from the hatters' supply houses. The small sheepswool sponge is the proper sponge for all hatters' purposes.

The hats are now ready for blocking.

Sort out the faded hats, which must be turned inside out and finished on the inside where the original color of the hat is still bright and untouched by wear and weather. These, of course, will be blocked inside out. Hats that require stiffening and are so faded as to call for turning, should be stiffened on the faded side, which will be the inside of the finished hat.

Notes on Hat Blocks

Each hat requires a block of the proper shape and correct size, in accordance with the wearer's instructions written on the job ticket and indicated by the number on the hat.

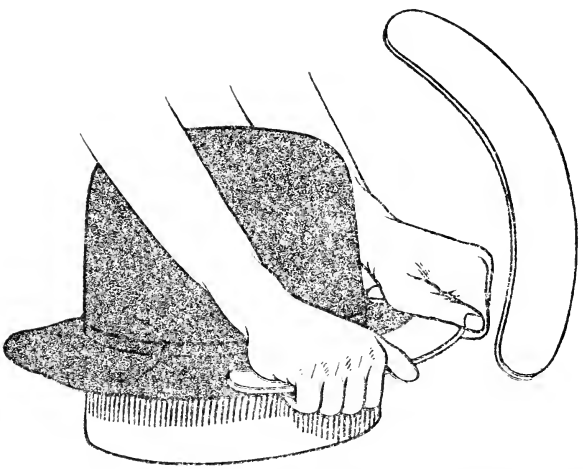
The beginner is not usually in a position to buy all the fancy telescope and alpine crown blocks. Most of these effects can be produced by hand, however,

after the hat is finished and trimmed. This work will be described later.

Before buying the blocks and flanges the market should be investigated to find whether second hand staple blocks may not be available at a much lower price than a new equipment would cost. Considerable money may often be saved in this way.

FOR PERSPIRATION-STAINED HATS

When cleaning fine hats for men who perspire copiously and whose hats are grease-marked from contact with the forehead, it is always best to *block them one size larger,* and have the trimmer sew a cork corrugation between the front of the hat and the sweat band. You can then assure the customer that his hat will not again become stained and so make him a permanent



QUICKLY BUT GENTLY PULL ON THE BRIM UNTIL ALL WRINKLES DISAPPEAR (AT RIGHT—THE PULLER-DOWN)

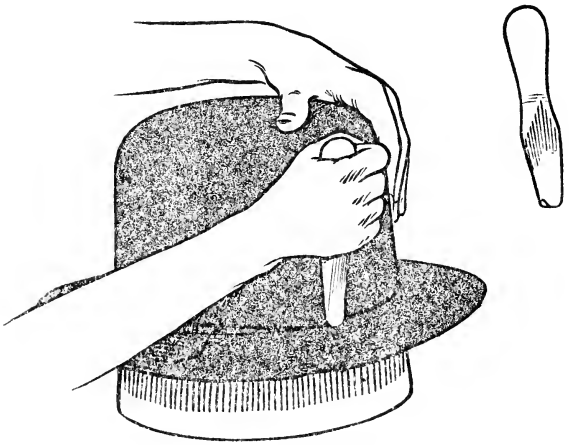
patron. This is a trick that can also be used in renovating stiff and Panama hats.

Blocking Soft Hats

Put the hat on the block, perfectly dry, working it down with the hands as far as you safely can without special exertion. Block so that the rear of the brim will become the new front in the finished hat, which will provide a new wearing surface at that part of the hat. Also see that the number of the hat is in the front. Next the blocking cord is put on (see illustration). This should be about half an inch above the band mark, which is the mark or crease where brim and crown meet. It is usually a rather heavy cord which can be obtained of the hatters' supply houses, and is put on with a tight slip-knot. Pull the cord tight, wetting the knot to hold the hat firmly.

Steaming Soft Hats

After the entire lot are put on the required blocks, they will need to be slightly steamed before they are pulled down. Place the steamer with about two inches of water—you will soon learn to use no more water than is actually required—on one burner of your gas or gasoline stove, the other burner being reserved for heating the iron. When the water boils, remove the lid and put the block in the steamer. The crown should be steamed only about 15 or 20 seconds, which will shrink it enough to make it grip the block tightly. Steaming more than 15 seconds makes the hat too porous, especially if it is pulled too hard. Then, using the puller-down, quickly but gently pull on the brim until all wrinkles disappear and the hat is firmly on



THE CORD IS WORKED DOWN TO THE BAND-MARK WITH THE RUNNER-DOWN

the block, after which the cord may be worked down to the band-mark with the runner-down.

Methods used in finishing soft hats depend largely on the quality of the hat. In finishing very fine hats which fit easily on the block use but little steam.

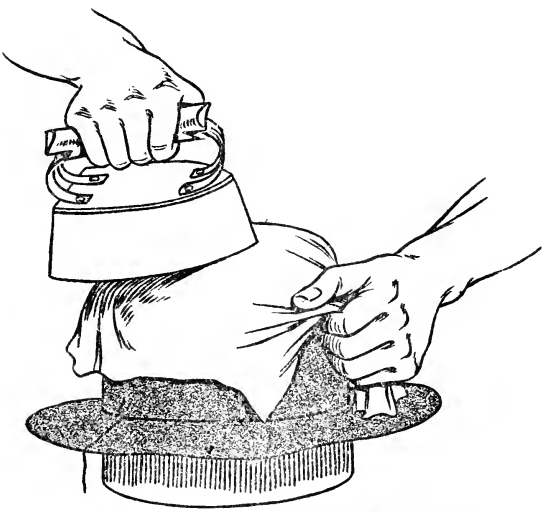
If the shape is to be altered from a tapering or alpine effect to a fuller crown, such as the Dakota, the hat after steaming should be worked down over the block with the palm of the right hand until the tip of the crown is perfectly flat on the block. Then a little pull with the puller-down will remove all the wrinkles, but work mostly with your palms and sparingly with the puller-down. Such hats may need to be steamed two or three times.

CHAPTER IX

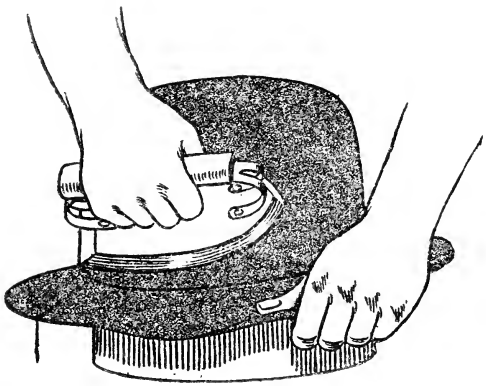
Ironing and Pouncing

NOW the hats are on the blocks, the steam dried out, and ready for ironing and finishing.

First look at the bottom of your iron and see that it is perfectly clean. If not, the surface should be lightly sandpapered. To prevent scorching, cool the iron by dipping the nose into the finisher's tub. You will soon learn by the sound produced whether the iron is down to the right temperature. In ironing light colors, a cloth of duck or Canton flannel should be laid over the hat to make certain that the iron does not soil the work.



A CLOTH WILL PREVENT LIGHT COLORS FROM BECOMING SOILED



WHILE IRONING THE CROWN, PULL CONSTANTLY ON THE BRIM TO PRESERVE ITS PROPORTIONS

Having the iron prepared, dip your sheep's wool sponge (only one sponge being necessary for all light colors and one for all dark colors) into the clean water in your finisher's tub or basin, stationed on the right hand far corner of your bench. Squeeze out the sponge thoroughly and run it over one side of the crown, rubbing hard with the nap. Then iron dry, always with the nap, until the water marks disappear and a gloss comes up, proving that it has been well ironed. Repeat the operation on the other side, and continue until the sides, front and back have been ironed. Then do the same to the top, always ironing in one direction, and endeavoring to spin a nice center to the top of the crown. Turn the block on the bench while ironing.

When a hat is being ironed there is always a tendency for the brim to get narrower and the crown higher. Therefore it is important to remember to

pull constantly on the edge of the brim while ironing so as to keep the brim at its original width.

Pouncing Soft Hats

When the ironing of both the light and dark hats has been completed, work out the hair by rubbing over the surface with fine emery paper, being careful to rub the nap one way only.

Strips of emery paper about 3 x 4 inches in size are used as a pad being placed in the curved palm of the hand and then rubbed over the surface of the felt in such a way as to cut out the short hairs without cutting or tearing the fibre of the felt.

On a fine hat fine emery paper—7-0 to 8-0—should be used while for a coarser hat 5-0 to 6-0 would be best. On a fine hat the coarser paper would cut the fibre and make the surface raw, while on a coarser hat the fine paper would not cut out the hair.

As stated, the paper is applied by using three or four thicknesses formed in a pad which is held in the curved palm of the hand. It is the general practice to take a number of thicknesses of old pieces with one thickness of fresh paper on top. The piece of fresh sharp paper will give the proper results when first used for the pouncing and then in order to finish off the surface a piece of old dull emery paper is used in order not to cut too much. In other words, a fresh sharp paper to start pouncing and an old dull paper to finish it up.

Care must be taken to pounce every part of the surface of the hat evenly, applying the same amount of work and the same pressure upon all parts of the surface.

The brim must then be pounced in the same manner on both sides. It is not necessary to use as fine paper for pouncing the brim as for pouncing the crown.

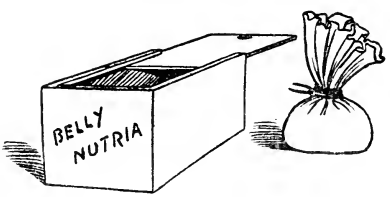
This pouncing treatment, it should be said, does not apply to scratch-up beavers or velours. A special finishing treatment for these hats is described further on.

Pouncing requires trained skill and judgment, and the beginner should experiment on some old castaway hats or "will calls," which can usually be secured from the retail stores for little or nothing. By faithful practice and the exercise of patience, proficiency in this work should soon be reached.

Finishing Powders and Greases

In working cheap coarse hats or hats that show mottled and streaky color, powders serve a purpose at this stage. With fine hats, finishing powders are not used.

The powders, which may be secured from the hatters' supply houses in the colors most in demand—commonly belly nutria, white, light pearl, blue pearl, cream and otter—are applied with pads or bags of cheese cloth, double or triple thickness, each bag filled



FINISHING POWDERS SHOULD BE TIED IN BAGS OF CHEESE CLOTH AND KEPT IN SEPARATE BOXES

A HOT IRON MELTS THE FINISHERS' GREASE INTO THE LURE

with a separate color, tied at the top to prevent waste, and each bag kept in a separate box.

A grease pad or lure, one for each color powder, will also be required. These can be made of light duck filled with cotton, and should be about 1½ inches thick, and 3 by 6 inches in size. An extra grease pad is also needed to be used on black, blue, green and all dark colored hats. These should be loaded with finisher's grease—cocoanut oil being very satisfactory—by spreading it evenly over the entire surface of one side of the pad and melting it in by applying a hot iron to the oiled side of the pad, taking care not to scorch the pad.

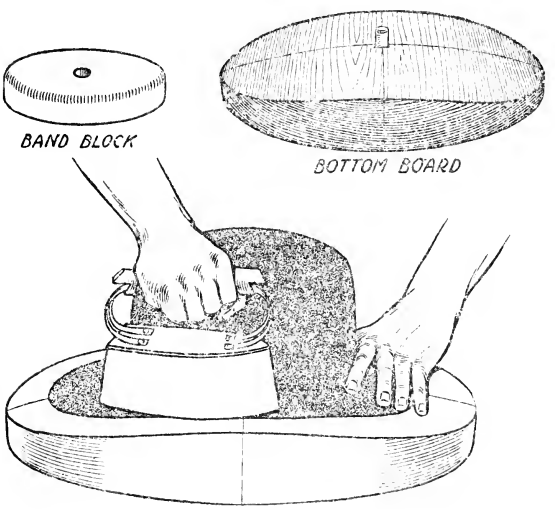
The powder is applied by dusting and rubbing the pad over the crown, belly nutria to belly nutria hats, light pearl to light pearl hats, etc., covering them with the powders and rubbing them in with the palm of your hand. Then rub on the grease pad quickly and vigorously, first touching the pad to the hot iron to melt

the grease. Rub first against the nap and then with the nap until the hat has a glossy appearance. To remove the glaze, work over it, with dull emery paper, which will also help to distribute and work the grease in, then give the upper brim a good heavy dash of cold water with the sponge, and iron the hat dry. As a dead finish is desired on the better grades of hats neither the grease pad nor the powders are used in finishing them.

CHAPTER X

Brim Work (Soft Hats)

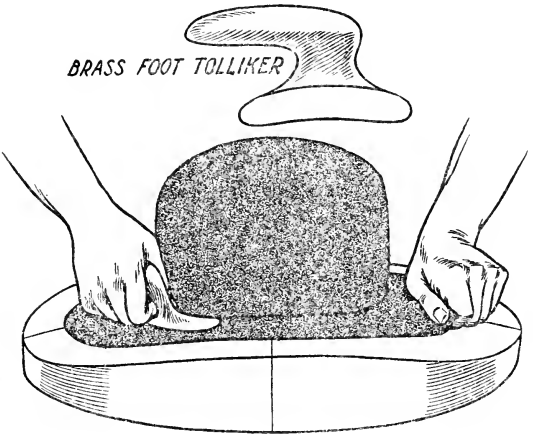
THE underbrim should be ironed, to remove the wrinkles, and give the brim the proper form, before the finishing work is done on the crown. This is done by turning the hat on the block upside down, and inserting it in the half circle that is cut out of the work bench. Then, when the crown is finished, take the hat from the blocks, insert the proper band block, and iron the upper brim on the bottom-board. In ironing, short strokes should be taken with the ironing shell, to avoid marking on the quarters of the board.



INSERT THE BAND-BLOCK AND IRON THE UPPER BRIM ON THE BOTTOM BAND

Ironing the Brim

As the brim is being ironed, and while the parts are still steaming, the iron or brass foot-tolliker should be run at frequent intervals over the band-mark, pressing very firmly, as a perfect band-mark is one of the features most essential to a well finished job. A piece



WHILE THE BRIM IS BEING IRONED, PRESS FIRMLY ON THE BAND-MARK WITH FOOT TOLLIKER

of twine tied tightly around the band-mark while the hat is on the band-block, will also help.

When the brim is thoroughly ironed, pounce by rubbing both upper and under brim with emery paper, treat with the hot grease lure as was done in finishing the crown, and take off the glaze with dull sand-paper.

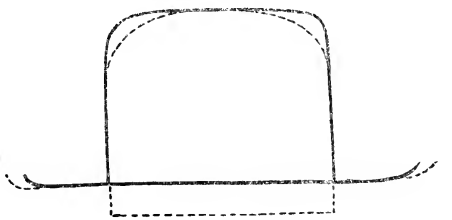
Changing Brim Widths to Order

Frequently, a hat is left with the renovator with instructions to alter the width of the brim. This work

must be done while the hat is still on the block in the process of blocking and finishing.

Making a hat brim wider or narrower to order is a delicate job, requiring the utmost skill and experience. However, by using careful judgment you may be able to undertake it in cases where the alteration is insisted upon.

Where a wider brim is asked for, the blocking cord



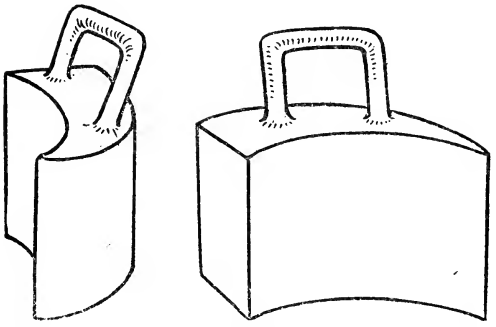
IF THE CROWN IS SQUARE, A LITTLE MORE BRIM MAY BE GAINED BY PUTTING IT ON AN OVAL BLOCK

must be adjusted about ½ or ¾ of an inch above the band-mark. To make the brim ½ inch wider you must reduce the crown at least ¾ of an inch in height. Sometimes, if the crown is square, a little may be gained by making it an oval, giving the hat surplus height which can be pulled out into the brim. Apply plenty of water to the underbrim, iron it with a hot iron, thereby creating the necessary steam, and quickly pull on the edge of the brim with both hands pulling away from each other so as to stretch it to the new size.

For a narrower brim and higher crown, run the blocking cord down the hat with the runner-down until the brim below the cord measures the desired width. This, of course, will result in wrinkles where the spreading brim is squeezed under the cord. To

remove these hold the block in the left hand and lay the brim in the semi-circle at the corner of your finisher's bench. Sponge the underbrim thoroughly and run the iron over it until the wrinkles disappear. Very obstinate ones can be eradicated as follows: Steam the brim thoroughly and quickly place the block on the spinner. Then, holding the crown with one hand, pull steadily and gently downward at the edge of the brim with the fingers of the other, so as to remove the wrinkles. Keep steaming, ironing and pulling the edge downward only, until the new band-mark is up to the blocking cord.

Both in widening a brim and in making it narrower, a rounding jack must be employed after the upper brim is ironed dry, to secure a perfectly round edge. The use of the rounding jack is described later in the chapter on curling. Sometimes, in the case of a brim with a perfect curl which you wish to return or a narrow brim with bound edge from which the trimming is not to be removed, you can "iron in" a perfect band-mark without spoiling the curl or removing the trimming by the use of a small toy iron, bought at a toy store or a five and ten cent store. If this is not satisfactory a special iron may be made at a foundry, as there is as yet no satisfactory substitute on the market. It should be about 4 inches long, 2½ inches deep and 1½ inches wide, and curved on the left side to fit your band block. The handle, about 2 inches deep, should slant away from the curved side. If the edge on the hollow or curved side of this iron is quite sharp, a perfect band-mark may be made with it, in many cases without the necessity of removing the binding and recurling the brim. In using this kind of a brim iron,



THIS SPECIAL IRON FOR IRONING BAND-MARK WITHOUT REMOVING TRIMMINGS CAN BE MADE AT A FOUNDRY

always use it with the heel from you and take care in having it made that the curved side is so located that you can do this. It is best to make a model of wood for the foundry man to work from.

The Final Touches on the Block

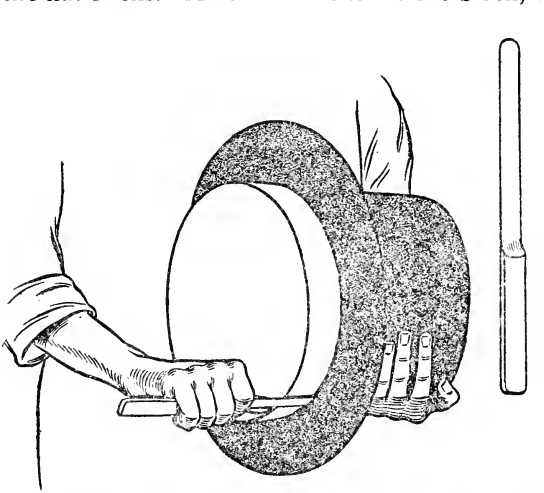
After the brim has been ironed, pounced and lured, put the hat on the block again, go over the crown lightly with a sponge, distributing the moisture evenly, and set to one side to dry. This cleans up any mottle that may have developed in the handling.

The hat, still on the block, is now ready for the smoke bath which is applied only to the darker colors —blacks, dark greens, dark blues, dark browns, etc., the smoke filling up the pores of the hat wherever the colors may have been cut in the pouncing after the dull paper was used. The smoke bath also produces the desirable dead finish.

The smoke is obtained by cotton waste soaked in crude oil in a metal pot, which, when lighted, will

produce the smoke required. The pot should have a tin cover to place over it in order to put out the flame after use. The hat on the block should be held in the smoke, the hand being turned from one side to the other until the body is thoroughly smoked. Then rub with a dry cloth to take off the effect of the singe. Singeing to produce a dead finish is only used on dark hats, the sponging being sufficient for the purpose on the light hats, such as pearls, belly-nutria and side-nutria.

The hat is now ready to slip off the block. Round the brim to the proper proportions with the rounding jack, mark the back of the hat on the underbrim with a piece of chalk, marking the exact center according to the block, remove the cord and take the hat off the block, using a slip stick between crown and block in case the hat sticks. After the hat is off the block, con-



WHEN THE HAT STICKS, RUN THE SLIP STICK AROUND THE BLOCK

tinue the chalk mark made on the underbrim into the crown about one inch, which will indicate the back and exact center, serving as a guide for the trimmer.

CHAPTER XI

Curling Soft Hats

WHETHER you intend to confine your work to soft hats or to branch out into stiff hat alteration, a knowledge of curling will be absolutely essential. All raw edge hats—except of course those intended to have flat brims—will need to be recurled after they are cleaned and trimmed, and before they are flanged. Bound hats from which the binding has been removed, changing them to raw edges, will also require curling.

If stiff hat work is contemplated, a more extensive outfit and a more complete mastery of the art of curling will be needed. For the beginner, however, a knowledge of soft hat curling is all that is necessary.

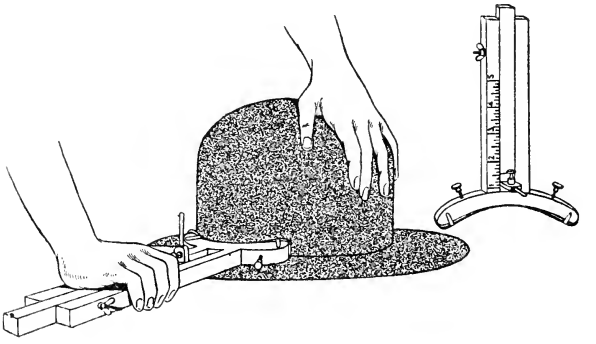
Tools Required for Soft Hat Curling

For curling soft hats your equipment should be: two round shackles (or curling tools), one a half-inch shackle, and for producing heavier curls such as are used on Fedora hats and turbans, a seven-eighths-inch round shackle. Of these tools the one you will use most will be the half-inch shackle—in fact, if you do not wish at first to trouble yourself with the shackles of various widths and styles, you can get along satisfactorily for some time with the half-inch round shackle alone. Nearly all soft hats can be curled with this tool.

The Use of the Rounding Jack

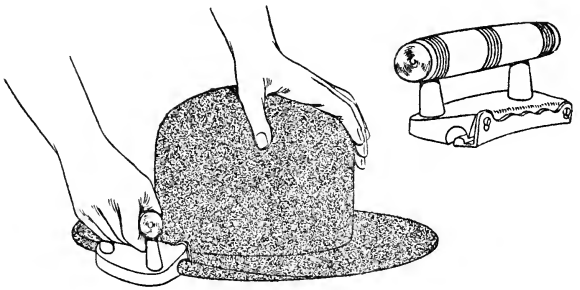
The rounding jack is employed where the brim of the hat is to be made narrower before it is curled. If the customer wishes the brim width to remain the same, the rounding jack is not used.

The brim is cut down in the following manner: Set your rounding jack to the desired width and adjust the blade to about one-eighth inch, so that it will just penetrate the felt without marking the brim board underneath. The hat is now on the brim board, the band



THE ROUNDING JACK IN PLACE

block inserted in the crown, the brim ironed and the band mark sharp and distinct. With your left hand, fingers and thumb outstretched, hold the brim firmly to the band block, as it lies flat on the brim board. Then put the rounding jack in place, pressing it against the band block and pull it toward you, revolving the hat until the circle is complete and the brim is evenly rounded.



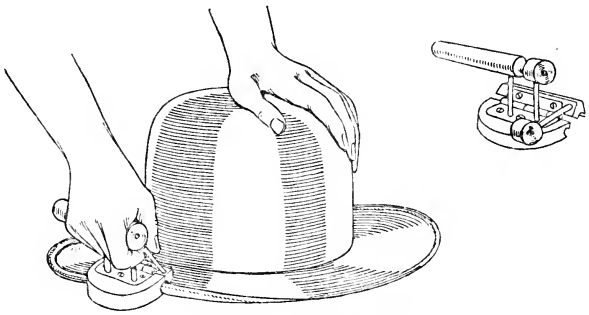
THE CURLING SHACKLE FOR SOFT AND STIFF BRIMS

HOW THE CURLING SHACKLE IS USED

If the hat has a broad brim (stiff military brim) or if it is a style that is worn flat with no curl, no more work is necessary. But should it require curling, your half-inch shackle will come into use.

With your wet sponge, moisten about half an inch of the felt, all around the edge of the brim—both upper and under brim. Do not get it too wet, but just moist. Now take your half-inch curling shackle from the curling stove, where it has been heating, and run it to and fro over the moistened edge until the desired curl is obtained. The same precautions should be observed here as in ironing. The shackle should be absolutely clean and free from dust, and if so hot that there is danger of scorching the felt, should be cooled slightly by dipping in your tub of water.

It is not easy at first to make an even curl on the brim, and you will have to watch your work constantly. But with a good eye and a steady hand you will note a remarkable improvement after you have curled a dozen or more hats.



THE HINGE SHACKLE FOR PENCIL CURLS

Should a flat edge or D'Orsay curl be desired, you can either use a five-eighth-inch D'Orsay curling shackle or, lacking this, you can curl in the regular way and press the edge of the curl flat by ironing it under a damp cloth.

In seasons when heavy curled brims are the vogue, a seven-eighth-inch curling shackle will be better than the half-inch one.

For pencil curls, a hinge shackle, as illustrated, has been invented, allowing the shackle to be removed without cracking the finished curl.

FINAL WORK ON THE BRIM

After the hat is curled and trimmed the brim should be flanged and set. The quickest and most effective way to do this is with the flanging block and the hot sand bag, the use of which will be described in the next chapter. The beginner, however, may find the equipment for this work too expensive to be purchased immediately—as a number of styles and widths are required, each in at least six sizes—from 6¾ to 7⅜.

If you intend to conduct a department for the finishing of rough bodies, you can hardly get along without this equipment. But for regular renovating work, you can do very nicely at first by shaping the hats by hand.

Boil the water in your steamer, move one side of your brim over the hot steam until it becomes flexible and soft. Then roll it up slightly with thumb and fingers until you have the desired set. While it is still steaming you can put it on your curling board and shape the brim by rubbing your thumbs over the upper brim. Then repeat with the other side. Then steam the front and back, dipping them as desired, cooling them off and shaping or setting the brim on the curling board.

CHAPTER XII

Flanging

FLANGING is for the purpose of firmly setting the brim in the desired shape. It is applied to soft hats only.

For a time you can get along by shaping your brims by hand, but when your business begins to grow, and particularly when you begin to finish hats from the rough, a flanging outfit will be a necessity.

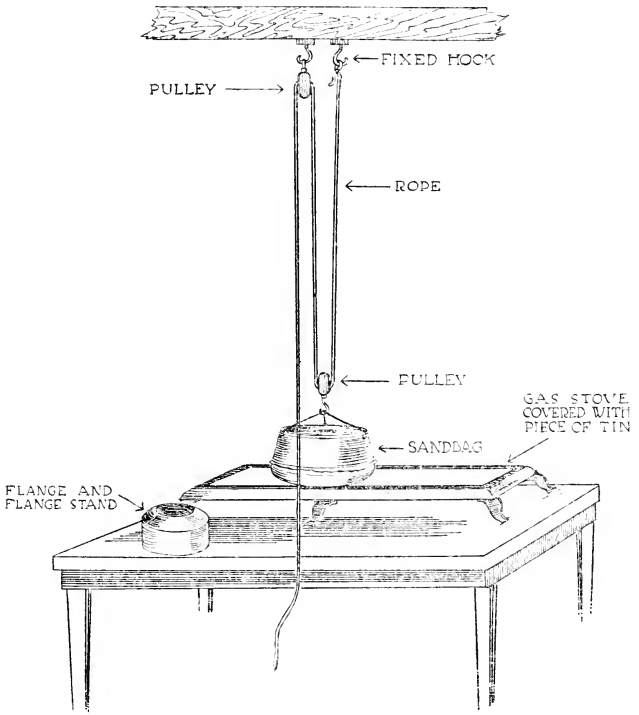
The requirements are: a flanging bench; sand bag; baker; flange stand, and a variety of flange blocks suitable for the different styles of brims.

The Flanging Bench

The bench should be 24 inches high, 4 feet long and 15 inches wide. This will give you room to prepare one hat on the flange while another is flanging.

The Sand Bag

The sand bag is a metal pan similar to a dishpan, with a small hole in the bottom into which the fine sand can be poured. It should be about 18 inches in diameter. Over the top of this pan is placed a piece of heavy white drill or canvas, and over this a piece of canton flannel to give a softer surface. The double cloth is then fastened in place by being turned over the edge of the pan and securely tied in place with a stout string. The pan is then inverted and filled with very fine sand.



HOW THE FLANGING APPARATUS IS ARRANGED

The finished sand bag, ready for use, may be bought from the supply houses. In some of the larger factories the sand bags are used with a flexible electrical heating element embedded in the sand, keeping them always at the right temperature.

To permit you to handle the bag quickly and easily, a pulley arrangement must be rigged up directly over the flanging bench and the sand bag hooked to the pulley, so that when lowered it will rest on the baker.

This should be arranged on the principle of the block-and-tackle, as shown in the illustration, which greatly reduces the resistance of the weight to the pull of the operator.

Where the ceiling offers no beam heavy enough to support the bag, the whole thing may be constructed as part of the flanging bench—a heavy support at each end of the bench, surmounted by a beam into which the hooks can be screwed. The best position for this overhead beam is about midway between the baker and the part of the table on which you will do your flanging. This will enable you to swing the bag easily from the baker to the hat on the flange.

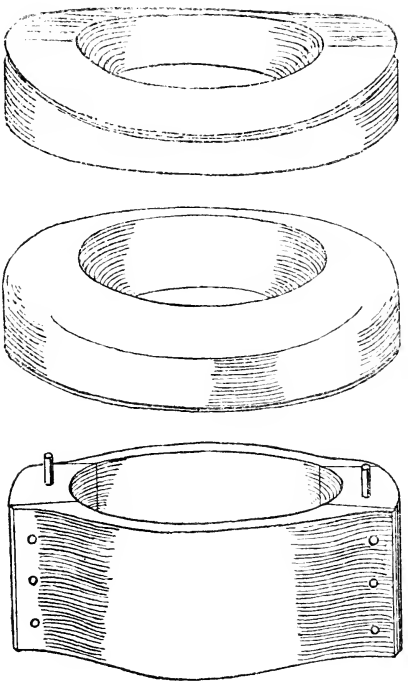
THE BAKER

The baker is simply a means of heating the sand bag, for it is by both weight and heat that the bag acts on the hat. In the large factories the baker is usually a pipe radiator laid on its side and covered with a sheet of tin. Every shop must devise its own baker, according to the heating facilities available.

In the average small shop, a four-burner kitchen gas-stove, such as may be bought or rented from the gas company, should serve the purpose. With the gas turned very low, and the whole covered with a sheet of iron or tin, this should make a serviceable baker.

Over the tin is usually placed a piece of heavy cloth which will assure the bag against burning, if the baker chances to get too hot.

When not in use the sand bag rests on the baker, so that it is always hot and ready for use.



Flange Stand and Blocks

The flange stand is a foundation for the flanging block, having two iron pegs over which the block fits, and being hollow in the center to accommodate the crown of the hat—for all the work in flanging is done on the underbrim with the crown down.

Two general types of flange blocks are used—one for curled brims and one for brims that have no curl. The block for curled brims is smaller in circumference than the brim of the hat, so that the curl projects over

the edge and is not crushed flat in the flanging. The block for the uncurled brim must be of greater circumference than the brim of the hat, and will take any common size of brim, as the brim merely lies flat on the block and is not carried over the edge of the flange

FLANGING THE HATS

As stated before, all the work in flanging is done on the underbrim. After the hat is in place on the correct flange, and the flange fitted to the iron pegs of the flange stand, place over it a piece of dry canton flannel, stretch the flannel tightly over the brim, carefully smoothing out all wrinkles, then hold the edges of the cloth down by passing round them a piece of blocking cord, pulling the slipknot tight around the block as when blocking the crown. The cloth is then dampened with a sponge and the hat is ready for the application of the sand bag.

The sand bag is already hot on the baker. Raise it up with the right hand by means of the rope and pulley, and with the left swing it toward you until it is directly over the flange stand and block on which the hat is securely fastened; then lower the hot sand bag until its full weight rests on the underbrim of the hat.

The bag should remain on the hat for fifteen minutes, after which the bag is raised and is swung back to the baker in readiness for the next job.

The blocking cord is now removed, and the cloth taken off. It will be found that the heat from the sand bag, combined with the moisture in the damp cloth, have brought up the stiffening and nicely set the shape of the brim.

Special Brim Work

If the hat is a raw edge, with a curlless brim, it is now finished except for the rounding of the brim. If it is a curled hat, the curl fitting over the edge of the block will need to be ironed with a hand iron before removing from the block. If the brim is to be bound it must go to the trimmer, after which the flanging operation must be repeated; bound-edge hats being flanged both before and after trimming.

Bodies for raw edge hats should be ordered ⅛ inch wider than the required dimension. This ⅛ inch is then "pared" as it is called, either by hand with a pair of scissors or on a rounding machine.

CHAPTER XIII

Renovating Velours, Beavers and Napped Hats

Shaping Soft Hat Styles

IN the chapters on renovating and finishing soft hats it was stated that velour, beaver and napped hats required a different treatment than the ordinary smooth felt. This chapter will be devoted to the special treatment required by these hats, and will also give some pointers regarding the final shaping of the hats not included in the other chapters on soft hat work.

After removing the old trimmings brush the hats thoroughly, first with the nap, then against the nap, until the dust is entirely removed. Soak the hats in gasoline for at least twenty-four hours. When they have been soaked long enough, and you are ready for the cleaning, heat a large basin of water—large enough for the gasoline can to stand in several inches of water —and when nearly boiling take it to your cleaning room and immerse your gasoline can in the hot water for five minutes or longer, until the gasoline is quite warm. You then commence the cleaning.

Cleaning the Hats

Pour one gallon of hot gasoline into your cleaning basin, and removing one hat at a time from the hot gasoline in the can, clean by thoroughly brushing with a scouring brush frequently dipped in the cleaning basin. Brush *with the nap* only, except in the band-

mark, which, if very greasy, should be brushed vigorously to and fro until the grease stain disappears, after which it should be brushed hard, *with the nap,* with a penetrating brush, where the grease spot was.

Quick work is needed in cleaning these hats, since it must all be done while the gasoline is warm. If you have quite a number of hats and the gasoline gets cold in spite of your best efforts, it will be necessary to repeat the heating process.

As you are through with each hat hang it where it can drip until you are through with the lot. When all are cleaned, remove them if possible where they can hang in the sunshine for twenty minutes. At the end of this time brush them vigorously again with the same dry scouring brush as used before, taking care to brush *with* the nap, and hang them in the sunshine until they are thoroughly dry. Velours and napped hats take longer to dry than pounced hats. When you are sure that they are absolutely dry, you may begin to block them.

Stiffening

Fully 95 per cent. of the velours and beavers that come to the renovator require no stiffening. Should it be necessary with some individual hat, gum tragacanth or shellac may be applied as described in the article on stiffening soft hats.

Ironing

Put the hat on the block, steaming and pulling it down until it fits the block perfectly, and with your finisher's sponge wet one-quarter of the hat, commencing with the side. Then stretch the nap with

your penetrating brush, and iron that section of the hat until it is dry and thoroughly pressed. Repeat this process until sides, front and rear are ironed, being careful that all the sponging, stretching and ironing is done in one direction only—*with the nap*. Finish the top of the crown last, using your sponge so that it spins a center in the top, wetting the whole tip in one operation. The same precaution should be observed in following up with the penetrating brush and the hot iron. The iron should also be observed to see that it is perfectly clean, without rust or other particles and not so hot that there is danger of scorching.

Never use sandpaper, however fine, on these hats.

After the hat is ironed, squeeze out your finisher's sponge, touch it to the hot iron to create steam and rub it over the hat with the nap while still steaming. Then set the hat aside (still on the block) to dry.

Before removing the hat from the block it must be given the rough, shaggy effect required in the scratch-up. This is done after it is quite dry by rubbing the dry penetrating brush over the surface—this time against the nap.

The brim should be treated in the same manner, sponging and ironing with the nap, and when dry, scratching up by gently brushing against the nap, with the penetrating brush. Never brush hard, or press the brush too firmly against the hat.

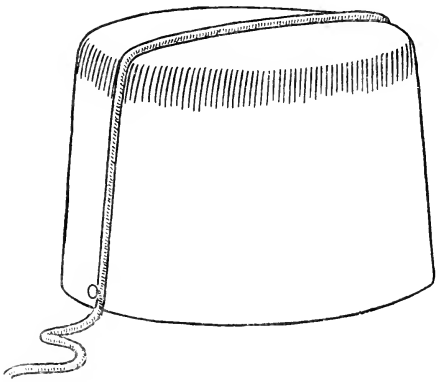
Shaping Soft Hat Styles

A few words on the final shaping of the hat are appropriate here, although this work is not done in most cases until after the hat is trimmed and ready for delivery. It is mentioned here because there are

some effects that need to be started when the hat is first put on the block.

For instance, the cord effect that some hats have on the crown is attained by tacking a piece of blocking cord over the block from front to back, taking care to have the cord exactly in the center. The hat is pulled on the block over this and the cord mark remains after it is pressed.

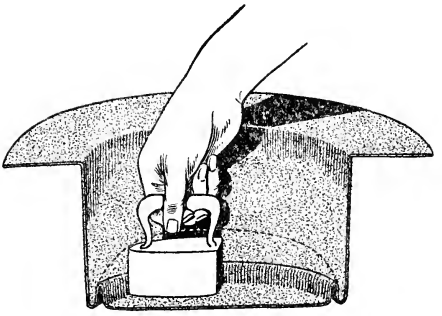
Fedora, Alpine, Big 4 and Columbia crowns are



A PIECE OF BLOCKING CORD TACKED OVER THE BLOCK WILL MAKE A CORD MARK IN THE HAT

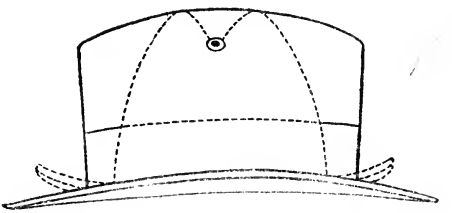
creased by simply running the forefingers of the right and left hand from the center of the crown to the back and front, pressing the crown until the desired crease is reached.

The telescope is made by pressing in the crown with your thumb and forefinger to the required height, measuring back, front and sides to be sure the telescope is an equal height all around, and then pushing the center of the crown up again, shaping it with the



A PERFECT TELESCOPE CAN BE MADE WITH A WARM TOY IRON

fingers. By laying the crown on a flat surface, after you have set the height with your fingers or with a warm toy iron, you can make a perfectly even telescope by pressing the inside of the crown. The various effects—diamond, tight, negligee, etc.—should be practised on an old castaway hat that has been thoroughly blocked, and, if necessary, stiffened, before you attempt the work on your customers' hats. Of course, if you prefer you can put in a set of telescoping blocks or a telescope machine.



HOW THE WORN CORNER BECOMES AN EYELET IN THE REBLOCKED FEDORA

It will sometimes be found that a fine felt fedora hat, otherwise in good condition, has worn through at back and front from constant creasing. It is an excellent plan with such a hat to block it so that these

holes come at the sides instead of front and back where they can be used for eyelets, which may be inserted in them, giving you new corners for your crease. A little work on the block will be necessary with a hat so treated in order to lengthen it back and front. This can usually be accomplished by steaming and pulling the felt in the desired direction.

CHAPTER XIV

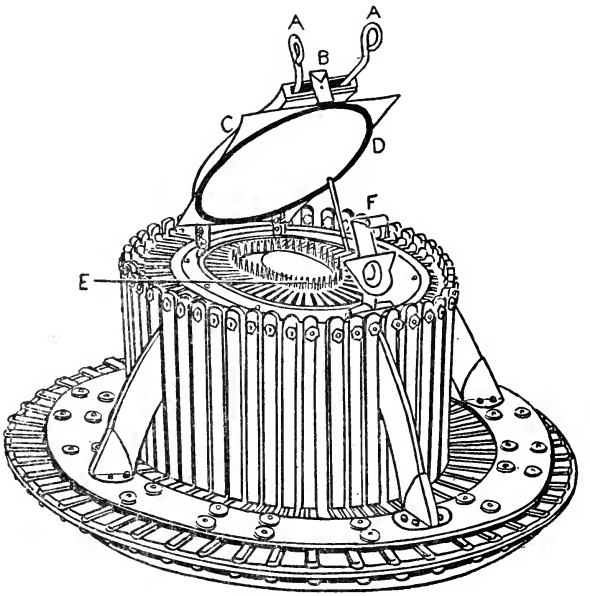
How to Conform a Hat

BEFORE passing on to the more difficult processes of stiff hat work a chapter on conforming will be of value. To be able to do this work is indispensable to the satisfactory selling of hats, and a few pointers will be worth remembering by the finisher and renovator.

Blocking gives the hat the original oval, so that any conformed hat left for repairs will have to be shaped again to fit its owner after it has been blocked. Again, the shaping of new hats that have been unsatisfactorily fitted certainly comes under the jurisdiction of the hat repairer. Where the bench is located in the back of a retail store there will be a good deal of conforming work to be done. Retailers themselves, when they have no renovating department in connection with their store, should be able to conform hats that require it, if they would give the full satisfaction that makes the truly successful sale. Nine-tenths of all sales made require no conforming. Those customers who do need their hats shaped, however, will fully appreciate the advantage of being carefully fitted, and you will be sure of their loyal patronage as well as that of the hard-to-fit among their acquaintances. The advertising value of the conformator is also considerable.

The conformator consists of two separate parts, the conformator proper, and the formillion, or shaping block. The purpose of the former is to transfer to a

piece of paper the exact outline of the head on which it is placed. This paper outline is then used as a pattern, by which the formillion is set so that it may in turn give the hat the shape of the head which has been recorded on the pattern. Besides the apparatus mentioned, the retailer, or renovator, should provide



READY FOR THE CONFORM

himself with a brim board and an iron foot-tolliker for smoothing the brim.

The first step is the insertion of a piece of medium stiff paper—ordinary heavy Manila paper will do—on which the conform is to be marked. This is done by

releasing the catch (B) with the finger until the frame springs forward. Place the paper against the cork, and replace frame and catch to their original positions. Then the hinged top may be rested on the steel spring (F) until ready for use.

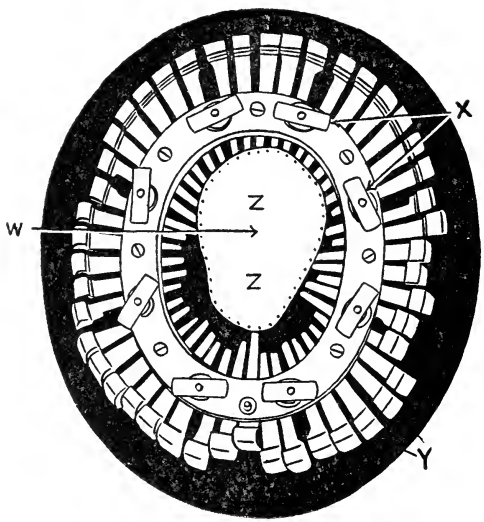
To take the conform, the machine is pushed down on the head, keeping the center mark of the machine directly over the center of the forehead and directly in line with the nose. One mistake often made is the resting of the conformator on the head exactly as the hat is worn, whereas it should be pushed down one-quarter of an inch *deeper* than the hat is worn. If this is not done, the conformator will register one size smaller than the correct head size.

This pushes the keys out in accordance with the variations in the circumference of the head and causes a corresponding movement of the pins (E). As one man can never place a hat on another in the same manner as he himself would wear it, it is as well to allow the wearer to assist you in adjusting the conformator. Often an almost imperceptible touch which adjusts it to the right spot, known only to the wearer, will cause an altogether different form to be reproduced on the paper. After you have an angle that suits the customer, however, be sure that the conformator is pushed down lower than the hat is worn.

When the machine is correctly set on the head, the lid (C) is dropped, and the keys (A-A) are pinched together. This presses downward the lid holding the paper, and the pins are driven through the paper, perforating a reduced reproduction of the head shape.

The conformator is then removed from the head, the top piece raised and the conform taken out. Then we

come to another process—that of conforming the hat to the pattern on the paper. For this purpose the formillion comes into use. With a pair of scissors, trim off the unused margin of the paper, cutting around the outer edge of the perforated diagram, just as close as possible, without cutting through the perforations, leaving a small paper form (W). This is placed, with the rough side of the pin marks, on the two upright pins (Z) in the formillion block. It is important that these pins be inserted in the center perforations already made by the conformator, even though these perforations appear to be off center. Many heads are larger on one side than the other, and unless the hat is so conformed, it will have a twisted appearance on the head.



PAPER CONFORM ON THE FORMILION

When this paper is firmly fixed on the block, the loosened keys (Y) are pushed up so that their inner ends just touch the edge of the paper. This communicates to the outer ends of the keys the exact shape of the paper, enlarged to the proportions of the head from which it was taken. If the paper is too thin and flimsy it will curl and bend and make it difficult to get the exact shape. Therefore, stiff paper is recommended. When all the keys are in place, the thumbscrews may be tightened and the formillion taken from the block.

It is now ready to be placed in the hat. But before this can be done the hat must be softened by heating so that it will not break when the formillion is forced into it. Never attempt to change the oval of a hat even in the slightest degree without first heating it.

The gas stove used to heat and soften the hat has an iron plate over the burners to spread the heat so that it may strike every part of the brim. Over this about two inches above the burners are stretched two wires, and on these is a piece of asbestos on which the hat is placed brim down. To protect the crown, have a soft pad about 6x7½ inches and 3 inches deep to put in the hat, bringing it close to the edge of the leather. About half force of gas will produce a gentle diffusing heat so that the softening of the brim will be gradual. In a minute or two the brim will become easily pliable. Remove the pad and place the formillion in the hat. Put the hat on the brim board, brim down, and with the tolliker press firmly on the upper side of the brim close to the hat.

Care must be taken not to disturb the set of the brim. Before heating measure the distance from the

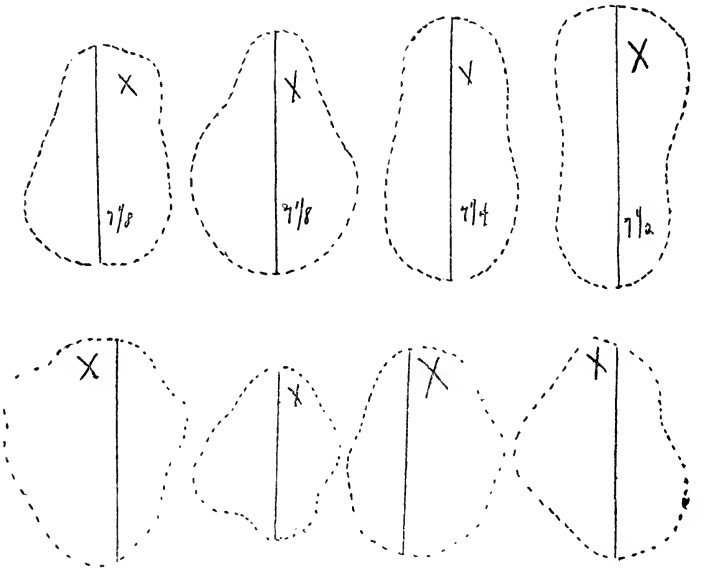
edge of the curl to the side of the crown. After the hat is conformed see that this measurement—⅞-inch, or one inch, or whatever it may be—remains exactly as before.

The process of conforming a straw hat is the same except that a gas stove is not used to soften the brim. Moisten the brim slightly on top and bottom, then iron the brim on both sides on a flat bench with a hot iron and a damp cloth. Rub a little Ivory Soap on the cloth to prevent it from sticking to the hat. After the formillion is in the hat, iron the brim with a hot iron and a dry cloth, being careful to make the brim perfectly flat. Do not remove the formillion until the brim is thoroughly dry.

By owning a brim press this process is greatly simplified. With this it is simply necessary to heat the hat for a moment on the plate, insert the straw hat formillion, place the hat with formillion on the plate, put down the lid, push in the slides which keep the brim flat, turn the handle to adjust the pressure, and remove the hat.

Conforming a hat is done by some retailers who do not possess the ingenious conformator, though, of course, it is more trouble and usually less satisfactory. Place the pad in the heat, heat the brim until it is just soft enough to bend. Then with the shape to be attained in mind, lengthen or widen as required by pulling slightly. Place it on the head to fit it to the small irregularities while cooling, touching the side brim if it seems to be thrown out to any extent. When the hat is cool, heat the front and rear brim alternately and rub it smoothly with the tolliker on the curling board.

The two precautions to remember are: Don't try to conform a hat without heating; Don't heat the brim until it melts.



SOME HEADS THE HATTERS HAVE FITTED WITH THE CONFORMATOR

CHAPTER XV

Cleaning Stiff Hats

MY experience has been that over 50 per cent. of the stiff hats brought to the renovator to be cleaned are in good condition except for a grayish dusty appearance caused by the accumulation of dust and the effects of wearing them out in the rain. Not one man in a hundred knows how to brush or take care of his derby, and most hats in consequence lose their luster and take on a shabby appearance long before the felt is actually worn.

Sponging and Luring

If the derby is in good shape and simply requires a new finish, you can produce this by sponging and luring. You can conscientiously charge 50 cents for this operation, which takes about ten minutes, and is done as follows:

Brush the crown with a soft finishing brush and the brim with a soft brim brush. Then dip your sponge in about a quart of water to which you have added about twelve drops of Aqua Ammonia, squeeze out the sponge, apply it to your hot iron, and sponge the hat, commencing with the upper brim and especially under the curl. Then sponge the crown, frequently applying the sponge to the iron. Always sponge with the nap, and endeavor to spin a perfect center in the crown. Finish with the underbrim and binding (if it is a black hat) and hang it up somewhere to dry, away from artificial heat. If the hat is any other

color than black, it is well to keep the sponge away from the band and binding.

After the hat has thoroughly dried, brush it gently again, and polish it with your hot luring pad. An excellent brim polishing pad or lure can be made from a piece of heavy black woolen cloth which has been loaded with cocoanut oil by means of the hot iron. Always heat your polisher before applying it to the hat, and always, particularly on a stiff hat, finish *with* the nap.

Fancy colored hats can be treated in the same manner, though on these you must avoid wetting the band and binding when sponging.

Treatment for Greasy Hats

If the hat has been worn long enough to show grease spots, or the binding appears greasy or glossy from handling, a gasoline bath will be needed, in addition to the sponging and luring. Immerse the hat, trimmings and all, in gasoline for one half hour, then brush with gasoline as described in the chapter on cleaning soft hats, *except that derbies will not stand such vigorous brushing as may be used on soft hats.* Pay particular attention to the band and binding. After the brushing, hang the hat up to dry, and then proceed to polish it as described above. A charge of 75 cents is a fair amount for this job, though this must depend upon your individual reputation and upon your locality. Prices to be charged cannot be intelligently given in a course of this kind and only averages can be quoted. For blocking, if needed, you might charge 25 cents additional. If the binding be worn and the hat require a new one, another 25 cents may be charged.

When badly faded hats are brought you for repairs, it is best to reject them. To dye stiff hats requires an outlay of time, experience and money quite beyond the resources of the small renovator. There are a few cold dyes on the market, ready prepared for use, but I have never found one that would produce entirely satisfactory results.

A Twenty-five Cent Job

When stiff hats are being worn extensively, you can develop quite a profitable trade by advertising that you restore the luster of stiff hats while the customer waits, your charge being 25 cents. This operation requires about 10 or 15 minutes, and is done by simply brushing the hat and then running your hot polishing pad over the crown, polishing the brim and sponging the binding—do not sponge the entire hat. The result is a pleased customer and a new-looking hat.

Cleaning Badly Soiled Stiff Hats

Of all the stiff hats brought for repairs, not more than 20 per cent. will call for severe treatment. This 20 per cent. will be made up largely of finer qualities, selling for $4 or more, and which the owners have worn perhaps two or three seasons, until the greasy perspiration marks show on the band mark and the silk trimmings are conspicuously glossy and greasy. Hats in this condition will require new band, binding and sweat-leather, and may need to have a new nap scratched up in places, in addition to the gasoline bath, as prescribed for the greasy soft hats.

Rip the trimmings and remove the stitches, as was done with the soft hats to be cleaned. Soak the hats

overnight in gasoline, taking care not to crush or dent them in any way, either by pressing other hats over them, or by any other form of carelessness. The fewer dents you have to deal with, and the less blocking you have to give a stiff hat, the easier and better for you and the better for the hat.

Next morning brush the hats vigorously in warm gasoline but with a softer brush than was used on the soft hats, so as to preserve the nap.

If, after cleaning the hat, it should feel soft and "mushy," or if you should observe a bad dent where it has been crushed, mark a circle with white crayon around the dent or slight break indicating the spot that needs pressing. It is not necessary to stiffen a derby hat when it becomes soft. The steam and heat incident to the blocking will serve to weld the particles of shellac into their original stiffness. Where a hat is broken or cracked completely through the felt, it nearly always indicates a poor article, and it is probably useless to attempt to repair the break.

THROW OUT THE WHISK BROOM

Stiff brushes are responsible for a great many ruined derbies. The family whisk brooms and the stiff brushes used by bootblacks and porters are as destructive as so much sandpaper to the nap of a good hat. Every hatter should maintain a vigorous campaign against the use of the whisk broom. Advise your customers against it and urge them not to permit the bootblacks or the porter in the barber shop to use the whisk broom on their hats. Many stiff hats brought to you for repairs would turn out like new

if it were not for the spots and patches where the nap has been worn off by many brushings.

Scratching a New Nap

A hat thus worn can sometimes be improved by the following treatment: With a hard, dry sponge or with a woolen cloth or cotton hat pad, apply alcohol to the bare spot repeatedly for two or three minutes, to soften the shellac. Then rub for a few strokes with your stiff penetrating brush. Rub one way only, and do not rub too much. About ten strokes with your brush is sufficient. Repeat the process, applying the alcohol and giving a few brisk strokes with the brush. After the spot has dried, a good kid glove dye applied with a small brush to the new nap will complete the job.

CHAPTER XVI

Blocking Stiff Hats

What Blocks Do You Need?

IT is impossible for a hat shop to have a set of blocks for all the different styles that are constantly being put on the market; fortunately it is not necessary, as most of the work can be done quite satisfactorily—on one of two staples—the full, round crown or the oval crown. These I have found the two best all-round blocks for stiff hats on the market, and with a set of each you can perform all jobs that are brought you.

The Cap or Duffer

If the hat to be blocked is a size 7⅛ and it fits loosely on a 7⅛ block, a 7¼ block should be used. It is better to make it a shade larger and drum or draw the leather, than to steam it down and run the risk of making it too small. A still better method is to use a 7⅛ block with a duffer steamed down over it. The duffer is a hat body which is pulled over the block and steamed down tightly to make the block a size larger. It is sometimes called a cap. A very serviceable duffer can be made from an old castaway soft hat, thoroughly cleaned and steamed down over a derby block. The blocking cord is then run down about an inch into the brim and the brim under the blocking cord cut away. The brimless crown remaining about six inches high is the duffer. This can be used for years, and can be steamed down over any

size block to fill the vacancy between the hat and the block, when such exists.

Putting the Derby on the Block

The right block selected, and, if necessary, the duffer steamed down firmly on it, the hat should be put on the block. Do not attempt to pull the hat down while cold and dry. When the crown is partly in the block, remove the lid of your oval steamer, in which the water should be at boiling point, and expose the crown of the hat to the steam. The brim being outside the steamer, remains cold and firm. Leave the crown in the steam for just four seconds. Then grasp the back of the brim with the fingers of both hands and with both thumbs press the block gradually deeper into the crown. Then press in the same way at the other end, holding the front of the brim. Repeat this operation two or three times, first back and then front, until the block is well into the crown. This must be done quickly, and should not require more than 15 seconds. If by that time the block is not all the way in, remove the block from the steamer, allow the hat to cool for a few seconds, and repeat the steaming again for the same length of time, pressing the hat as before, first front, then back, until the crown is firmly on the block and no wrinkles remain.

Make it a point to heat or steam a stiff hat as little as possible.

If the hat is one in which you have found a slight crack or break, a damp cloth should be immediately laid over the spot which you have previously marked with chalk and the spot pressed with an iron quite warm but not hot. After ironing over the break lightly

for four or five seconds, run your heart tolliker over it. Finish by revolving the entire crown over your heater until the crown is quite hot, care being taken to avoid scorching or singeing. Then run your hot polishing pad or lure over the entire crown, pressing hard with the pad. Stand the hat aside for ten minutes, and then remove the block—which may require some care, patience and strength. The slip stick should not be used, being advisable only on soft hats and Panamas. When the hat is off the block you will discover that the break has disappeared and the crown is as stiff and firm as when it left the factory. If you desire a full stiff result, place the hot sand bag for a few minutes on the crown while the steam is still in the hat, then steam again for a few seconds and run your lure over it. Cool it off thoroughly before removing from the block.

Restoring the Band Mark

During the steaming process, the band mark on a derby will sometimes lose its shape. To restore it, put your stiff hat band block in the crown and hold the brim over the heater. When it becomes pliable, quickly run your foot tolliker over it. This work should be done either on your stiff hat brim board or on the bottom board. While the brim is hot and pliable, you can give it the desired set, either flattening it or increasing the roll and pitch, and after the hat is trimmed it should be polished again, to give it a perfectly new appearance before the customer arrives.

Dents Caused by Heat

Frequently you will receive hats that show a slight

dent in the crown, caused by being placed on a radiator, or, if it comes from one of your customers among the retail stores, caused perhaps by being exposed to the heat in a warm show case or a sunny window. In most cases these dents will not require blocking, but may be taken out either by holding the dented part over your heater or by placing the whole crown in your steamer for a few seconds until the dent becomes slightly pliable, and then removing it with the back of your fingers. Finish with the hot luring pad when cooled off.

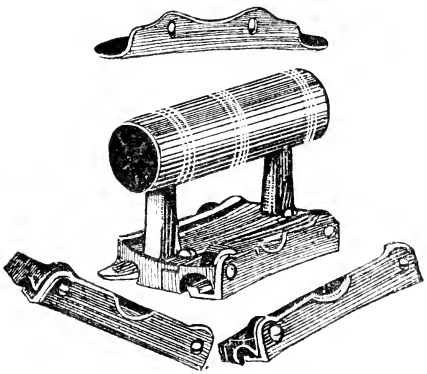
Some practice is necessary before you can become expert in the blocking of stiff hats. It is always best to try your skill on some old discarded hats before attempting the work on your customers' hats. When you get the knack you will also find it quite simple to change the style of stiff hats by shaping a full crown into a more tapering effect, and a tapering crown into a slightly fuller effect, when the customer so desires.

CHAPTER XVII

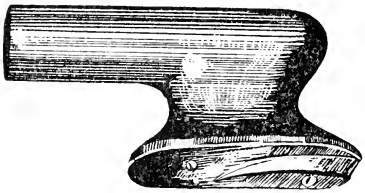
Curling Stiff Hats

THERE is no part of the renovator's work that requires more practice and skill than curling stiff hats. Before you try working on customers' hats you should acquire a certain amount of proficiency by practicing on some old castaway hats. By patient practice all the difficulties can be overcome. However, as noted before, the beginner will not find a knowledge of stiff hat curling absolutely necessary to his success, although he will find soft hat curling an essential.

If you expect to alter the brims and curls of derby hats, or to buy uncurled bodies and curl the brims yourself, it will be advisable to secure from one of the supply houses a curler's gas stove, a combination curling shackle to get the different curls, a brass "groove"



COMBINATION CURLING SHACKLE



FRONT AND REAR TOLLIKER

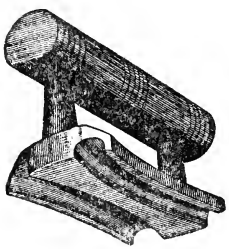
tolliker for the side brim, a front and back tolliker and a curling plane. Continued practice will make you proficient in the use of all these tools.

The combination shackle comprises a number of attachments that fit into one handle, the proper attachment being selected for each job. With it a round or D'Orsay curl and a variety of widths can be made. If desired, a separate shackle can be bought for each of these styles and widths.

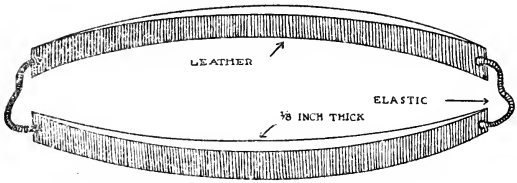
Rounding the Stiff Hat Brim

If the hat is being finished from the rough it will first have to be rounded. The same rounding jack as is used for soft hat work can be used here, and the process is substantially the same.

In using the rounding jack on a derby hat care should be taken to keep the front and rear of the



GROOVE TOLLIKER



HOME MADE STRAP FOR REGULATING BRIM WIDTH

brim narrower than the sides since much of the sides will be taken up in the curl. Brims on derby hats are always cut from one-quarter inch to one-half inch wider on the sides than in front and rear, and you must see that the rounding jack is regulated so this is done. It is here that the spring shown on the rounding jack illustrated in the soft hat chapter, comes into use. A turn of the little screws on the curved bar forces out the springs to any desired adjustment. The further the springs are pushed out the wider will be the hat brim at the sides. The reason is that on the long side-curve of the hat the jack travels along on the outermost points of the spring. As it nears the shorter curve of the end of the hat-oval, the hat gradually slips into the curve of the jack, thus bringing the knife closer to the crown.

If the jack is not equipped with the spring, the same end may be accomplished by the use of a strap or pad which you can make yourself. Take two pieces of leather belting, ⅛ inch thick, and shave their thickness down so that they taper at the ends, leaving the original thickness in the middle. The two pieces are then joined together by lengths of elastic, which can be stretched to fit over any size crown (see illustration). This is slipped over the crown, one piece of

leather at each side, so that the thickest part of the leather comes exactly in the center of the side-crown. As the rounding jack slides around this, it is pushed out by the leather to the proper degree as it reaches the side, and the knife consequently cuts the brim that much wider.

Curling

Before curling the brim the edge should be moistened with your wet sponge—both upper and under brim, as in soft hat curling. This gives it flexibility and insures it against scorching.

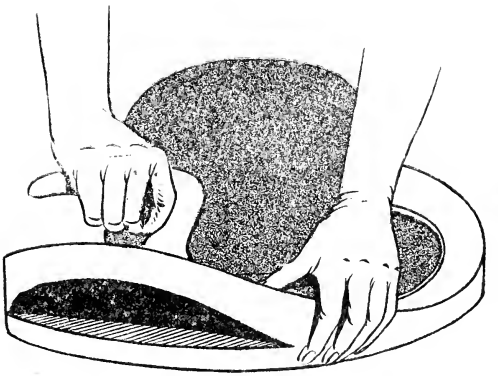
Then take your heated shackle, observing the same precautions as to cleanliness and degree of heat as in soft hat curling, and turn the moistened edge, slowly bringing it to the shape desired, and shrinking it thoroughly by continually running the hot shackle over the curl.

In curling stiff hats, curl the sides first. Then curl the rear with the small tolliker, which is grooved for the purpose, and finish with the front. If the result is somewhat uneven at the edges, smooth and round the curl evenly with the brass curling plane.

After the curl is completed, if a D'Orsay or sharp curl is desired, flatten it out with the large ironing shell until it appears like a welt edge. Then open it up carefully.

Setting the Brim

After the brim is curled, the next operation is to set the brim. Until now the brim has been flat and without character. On the set-board you give the brim its final shape, with the correct roll and pitch.



SHAPING THE BRIM ON THE SET-BOARD

This accomplishes the same thing for the stiff hat as flanging does for soft hats.

The brim must first be softened and made pliable. This is done with heat, and the shape which it is then given will remain in it when it has cooled and hardened.

Care must be taken, however, not to heat or soften the crown or bandmark. This is done by inserting a tightly fitting band-block in the crown, which prevents the heat from entering it. The hat is then set, brim down, on the baker, and left there just long enough to soften the brim until it is workable. A special gas stove is made for this purpose and its use will simplify the process. The hat rests on two asbestos-covered bars which keep it from contact with the hot stove, and a hole in the center keeps the crown cool so that no band-block is necessary.

When the brim is soft enough to be worked, the hat is removed to the set-board. This board is so cut that any desired roll and pitch can be found on its

surface. If a slight roll is needed on the brim it should rest on the board near the center, where the curve is slight. If a higher roll is wanted, press the brim against the upward flaring sides of the board. The front and back may be set in the same way. If a slight dip is needed, form it on the board near the center. If the hat is to have considerable pitch, it should be brought down near the outer edge of the board. All this is done while the brim is cooling so that quick work will be necessary to get all four sides into shape before it hardens and becomes fixed. While manipulating the brim on the set-board the brass foot tolliker should be run over it constantly.

When the brim has cooled and set the hat is finished and is ready for the trimmer.

CHAPTER XVIII

Finishing Rough Hats

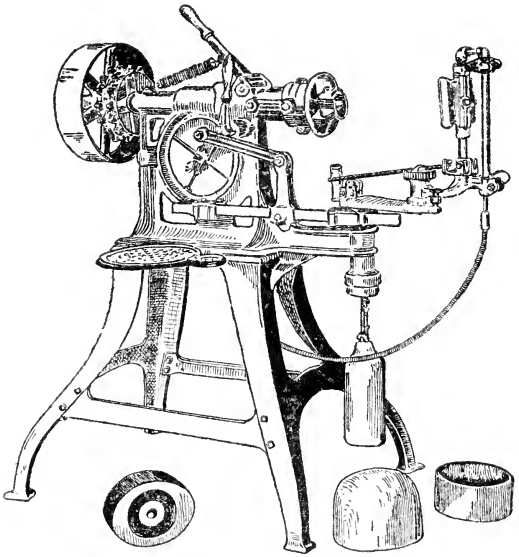
IN sections of the country where long winters are the rule there are often stretches of weeks, and even months, when little work is brought in. At such times the hatter who is equipped and able to finish hats from the rough can profitably take up the slack by making up new hats.

Specialize on "Odd Sizes"

These can be marketed in various ways. You can work up a nice little retail business of your own, specializing on "hats made to order." You can make up enough stock to sell to the local retailers, or you can advertise to these retailers that you are in a position to make up hats in odd and unusual sizes, such as are not found in the ordinary hat stock. To be prepared for this special work—which will gain you many regular customers—you should be well supplied with blocks in out-of-the-ordinary sizes—6½, 6⅝, 7½, 7⅝, 7¾, 7⅞ and 8. This will enable you to sell to men who have never been satisfactorily fitted in any other shop.

Buying and Selecting Styles

As early as November you should be able to size up with fair accuracy what styles and colors will be wanted for spring. There are many manufacturers who devote themselves entirely to producing bodies in the rough, in any stage desired—blocked and pressed.



THE AUTOMATIC IRONING MACHINE

blocked, pressed and pounced, and in the case of stiff hats, blocked, pressed, pounced and curled, ready to trim. Order a dozen assorted samples, select from these a few salable colors and two or three different grades, and reorder a few dozen each of the hats selected. These should keep you busy during January, February and March, slow months in your regular repair season.

SPECIAL EQUIPMENT

Practically the same process is required for finishing hats from the rough, as for reblocking and renovating used hats, though there are several additions to your equipment which you will need if going into

the business extensively. One is a baker and sand bag for flanging. Another is an automatic ironing machine for crown work, which it will be worth your while to buy if you expect to produce over three dozen hats a day. By its use an operator can turn out at least six dozen hats a day, and usually more.

Give the hats substantially the same consideration as hats sent in for repair. Light weight and medium weight bodies will need to be "squared" or built up by stiffening with gum tragacanth, as already described. The body is then hung in the drying room or put on a rack to dry over night. When dry, it is blocked, as in renovating, the brim pulled out by hand and smoothed on the work-bench with the tolliker. It is then ready for ironing.

MACHINE IRONING

Hand-ironing on the work-bench has already been described in the chapters on renovating. Practically the same principles apply to machine ironing.

All wooden blocks are made to fit the chucks on the ironing machine. Either gas or electric ironing shell may be used, depending on whether gas or electricity is available in the shop. Before applying the shell to the hat the body should be dampened with a wet sponge while revolving on the machine. The effect is the same as that obtained by shrinking the body originally in hot water in the back-shop.

It must be remembered that the tighter the felt the better the hat, and as every finishing operation has a tendency to open the felt, means should be taken to counteract this during the various processes.

You will soon learn by experience the exact degree

of heat required to produce the proper result. As in other operations it is well to practice ironing on some old castaway hats. Then if the hat is burnt there is no harm done and you will learn by experience to use a cooler iron next time.

After you apply the heated shell to the band of the hat, the machine completes the process automatically, carrying the shell from the band to the center of the top crown and back to the band, at which point the shell automatically drops off the hat and the ironing is finished. For fine grade hats, however, and even to secure the best results in the cheaper grade, the ironing operation can be repeated two or three times to good advantage.

The hat on the block is then taken from the machine and the brim ironed with the hand shell on the work-bench as in renovating. The hat is then singed, pounced, lured and passed through the smoke-bath, as described in the chapters on renovating.

In large factories working on coarse hats, a lathe is used in pouncing, revolving the hat rapidly while the emery paper is applied with the palm of the hand. But in the small shop this will hardly be necessary, especially as only coarse hats can be pounced with the lathe, the finer grades requiring all hand work.

THE DRYING OUT PROCESS

After the last finishing process has been performed, a damp—not wet—sponge is applied to the crown only and the hat—still on the block—is set aside to dry.

This provides a slow, natural drying-out process during which the felt again becomes tight and the surface clears up. Of course, while the body is thus

drying, you will be working on other hats, and at least six blocks will be necessary to keep you occupied. If it is impossible to secure enough blocks, the hat may be carefully removed from the block, and then, when thoroughly dried out, replaced on the block for rounding, as described in the chapters on stiff and soft hat curling. The brim is then curled and the hat is ready for flanging, which stiffens and fixes the set of the brim.

Finishing Stiff Hats

A few special precautions should be borne in mind with reference to stiff hat work.

To finish stiff hats bought in the rough hood a hydraulic press is essential, which would require an unwarrantably heavy investment for the negligible amount of stiff hat work done in a small shop. It is therefore the best policy for the beginner to buy the hats, already pressed, finished and ready to curl.

From this state to the finished hat the processes are practically the same as for soft hat work, with the following differences:

1—No stiffening or ironing are necessary, as the bodies are already stiffened and pressed.

2—At no stage should steam, water, or the wet cloth or sponge be applied to the pressed stiff hat. Wetting or steaming a stiff hat body will spoil the effect of the pressing.

3—In stiff hat work it is more necessary to find a block that exactly fits the hat.

While finishing new bodies practically parallels the processes of renovating, it is advisable to get your experience on renovating jobs before attempting the new

hats. Unless you have become familiar by experience with the action of felt during the various stages of treatment, you may ruin a number of valuable hat bodies before developing the necessary skill and judgment.

CHAPTER XIX

Trimming

MOST hat shops have one or more trimmers—either girls naturally handy with the needle and easily adapted to the work after a few instructions, or women who have been employed at some time in hat factories and who have mastered the art at its source.

There is no reason why the proprietor of a growing renovating shop should need ever to touch a needle. Nevertheless, to be a good judge of the work, to be able to estimate accurately and to know how to instruct beginners who take employment in his shop, a knowledge of the practical side of trimming is a necessary part of his equipment.

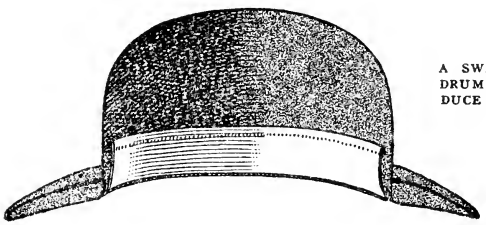
Good quality trimmings, neatly sewn on, will dress up any hat, while the most beautifully finished hat, carelessly trimmed, will fail to please your customers. So, while your own work may seem more important in your eyes than nice trimming, remember that this is one of the things by which the customer at first glance judges the worth of the job, and see that it equals the standard of the rest of the work.

Here, again, it is well to practice on some old hats before experimenting with those left by customers. Observe how the trimmings on new hats are sewn on. Rip apart an old hat slowly and observantly, noting the way band, binding, leather bow, etc., are attached.

It is useless to attempt to imitate those soft hats that come from the factory with the leather "whipped in" or sewn to the felt by machines, in fine stitches with-

out the use of a reed. Order all your sweat bands with reed attached, whether you buy your sweats plain or with die embossed on them. Use a black reed for dark brown, green, blue or black hats, and a belly-nutria reed for lighter shades. On Panamas, use a ½ inch or ¾ inch oil-silk or glaze reed. How the leather and reed are sewn in you can discover by taking apart an old hat and noting the method used.

Sometimes it is necessary to "drum" a sweat band—that is, make it a size smaller. This is a frequent request when you are doing work for retail stores which happen to be short on a particular size. Take the



A SWEAT BAND DRUMMED TO REDUCE THE SIZE

sweat band out of the hat, remove the sticker where it is joined together at the end and cut off ⅜ of an inch from each end of the sweat band. Then join together firmly with a new sticker, and when the sticker is dry proceed to sew the sweat band in the hat again, using shorter stitches than usual, and gradually stretching the reed so as to make the shortened leather reach around the same space of crown as it covered before it was cut down. When it is finished the upper part of the leather will be a smaller size and will fit comfortably snug on the head. On very thin leathers you can cut ½ inch from the end instead of

⅜ of an inch. This process will save many a sale that would otherwise be lost.

For sewing on bindings we have always found the Singer sewing machine most useful, first basting the binding on, either by hand or with the use of a basting attachment on the machine.

At one time a renovator would often have a request to sew a black bombazine band on a derby, silk or soft hat to indicate that the wearer was in mourning. The adjustable mourning band, procurable from the supply house in all sizes and widths, has now done away with this.

Trimming straw hats, Panamas and raw edge soft hats is comparatively simple work, but to become skilful in sewing on stiff hats and bound soft hats, will require faithful practice on the part of yourself or the person you have delegated to do the work. Good trimmings are well worth the effort it takes, however, and you will greatly improve the appearance of your work and be sure of pleasing the most fastidious, if you will see that only the best quality trimmings are used on your hats, and that they are sewn in carefully with neat, short stitches, as completely concealed from sight as possible.

CHAPTER XX

Cleaning Straws and Body Hats

TIME was when the man who wished to have his straw or Panama hat cleaned or renovated expected to leave the hat with the hatter for two or three days and to pay 75 cents to $1.00 for the work. The "Cleaned While You Wait" sign was not then to be encountered in every other block, and hats were better treated, and the hatter a more respected person. Since the bootblack hatter has come into prominence, with his slip-shod methods and showy but ruinous processes of cleaning and bleaching, the public's idea of what hat work ought to cost and how it should be done, has been somewhat distorted. The renovator may, if he wishes, copy the cheap, rapid, but altogether inefficient methods of the hatting bootblack; but I have found that good work is appreciated, and that a hatter who can turn out a thorough, lasting job, *and make his customer see why good work is really more economical than cheap work,* can ask his own price, irrespective of cheap competition. Every season sees more eyes opened to the worthlessness of the bootblack hatter's work, *and I cannot repeat too emphatically that the only way to give lasting satisfaction and build up a reliable, substantial trade is to do dependable work at a fair price.*

Bleaching the Most Satisfactory Process

Straw hats and Panamas that are brought you can be either cleaned or bleached, but the average wearer

knows nothing of the two terms, and merely asks to have his hat "cleaned." It is up to you to decide whether the hat needs bleaching or merely cleaning and to explain to the customer the advantage of the bleaching in case it is found necessary.

I much prefer to bleach every hat that is brought to the shop. Only by this process can a thoroughly satisfactory job be turned out without danger to the fiber or braid of the hat. Only when the customer will not pay the price for bleaching, or when he must have the hat back quickly, is the shorter process of acid cleaning to be recommended. There are occasions, too, such as the period before Easter, when you have more work than you can turn out, when it is advisable to select all the easy jobs and put them through the short process of cleaning, thereby giving you more time for the hats requiring greater care and attention.

The Wrong Way to Use Oxalic Acid

For cleaning slightly soiled straw hats, where the bleaching process is not desired, oxalic acid gives the quickest and best results, but the secret lies in knowing how to use it. The bootblack hatter also uses oxalic, but in order to get immediate action for his "while you wait" trade he necessarily uses a powerful solution. Also, he is not able to wash off the acid in water, since hats after being rinsed must be blocked and flanged, and he has neither the outfit or the knowledge for such work. Consequently, after he has scrubbed the hat with his powerful acid solution he merely runs a wet sponge over it to take off the surface acid, puts it on his motor and in ten minutes the customer walks away with a hat cleaned in appearance,

but full of acid and certain to become discolored in a very short time.

The Right Way to Use Oxalic Acid

For a quick cleaning with oxalic acid without harming the braid of the hat, proceed as follows:

Heat two quarts of water in an enamel or ironware basin, and when almost at the boiling point add: one half teaspoonful of oxalic acid, one-fourth teaspoonful of Sal Acetosella and one-fourth teaspoonful of lumped sugar of lead. Stir this solution and allow it to become sufficiently cool to work in.

Then remove the band and the sweat band of the hat, as well as all loose threads. To assist you in blocking and trimming later on, be careful to mark with a lead-pencil on the inside of the crown the place where the sweat band comes together in the back of the hat.

First brush the hat thoroughly with a dry brush to remove the dust and then vigorously with a brush dipped in the solution. On Panamas, Leghorns, Bangkoks and Manilas the brushing should be gentle, with a brush not too stiff; but on split braids, China, Belgium and Swiss yachts and stiff and soft Milans, a stiffer brush, preferably a short, stiff bristle, may be used and you must rub vigorously to and fro.

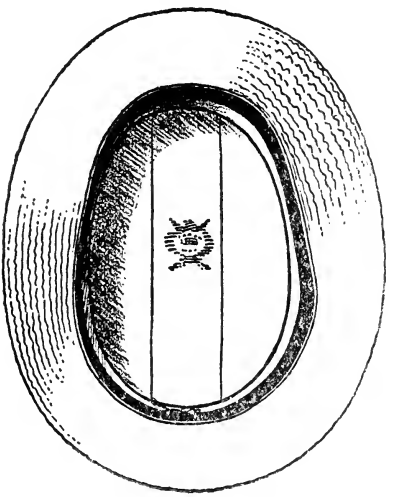
Do not use the solution too freely, as the less washing to be done the less work there will be to shape and polish the hat afterwards. Brush with long strokes, and make a brushful of the solution go as far as possible, giving the hat a minimum of moisture.

Brush first on the top of the hat, then the sides, then the underbrim and finally the upperbrim. Then imme-

diately hold it under the hydrant or dip it in a tub of clean water to remove the chemicals. This should only be for a second, after which let the water drip for a minute and mop off the remaining moisture with an almost dry sponge. Then hang up the hat, if possible in the sunshine, until it is *nearly but not quite dry,* as it is easier to press if not thoroughly dried. Put on the block and press under a cloth with an iron not too hot. When the hat is pressed and dry, polish vigorously with a clean towel or a handful of tissue paper.

GENERAL REMARKS

Stiff brim straw hats are often conformed to the wearer's head when they are bought, and this shape or conformation must be preserved when the hat is brought to you to be renovated. In these cases, water



A CONFORMED STIFF STRAW HAT MUST NOT BE IRONED ON THE BLOCK

should be used sparingly, and in ironing the brim the band block should not be used, since this would press the shape back to the regular oval.

It should be said here that the oxalic acid solution may be used repeatedly, only requiring to be slightly warmed each time before using.

For this work the charge should be about 50 cents on a straw and $1.00 on a Panama hat, and the customer should be made to understand that this price includes pressing and that a proper job cannot be turned out without this work, as the chemical must be washed out of the hat, the washing process necessarily resulting in a slight warping of the crown and brim, necessitating reblocking.

As stated, this process does not give the best results possible, and the customer should be urged when circumstances permit to have the hat bleached by means of sulphur fumes. This work will be described in the next chapter.

A Quick Bleach Without Sulphur Fumes

For a quick bleach without the use of sulphur fumes, on Bangkoks, Milans and split braids, the following is very effective.

Mix five pints of cold water with two pints of Bentalin. Then dissolve three ounces Bioxolate Potash in one pint boiling water and add this to the other solution.

Wash the hats in this solution, and rinse them thoroughly in warm water.

Then dissolve ½ ounce of permanganate of potash in a quart of warm water, and after allowing this solution to cool, sponge the hats with it until they are the

color of a walnut. Then, *without rinsing,* dip them repeatedly in the Bentalin solution, or, in the case of stiff yachts, apply the Bentalin with a sponge, until the brown color disappears.

When the hats have the desired color, rinse them in warm water and dry them in the sunshine.

Take care to keep the solutions apart, as a little Bentalin, from your sponge or in any other way, will ruin your permanganate solution.

CHAPTER XXI

Bleaching Straw Hats and Body Hats

TO get the best results on straw and body hats (Panamas not included), the bleaching process described in this article is necessary.

In bleaching such hats as fancy splits, Chinas, Belgiums, and Swiss braids, and soft and stiff brim Milans, Mackinaws, Manilas, Leghorns and Bangkoks, it is first necessary to take off all the trimmings. as was done in cleaning felts, and remove all grease spots by brushing with hot gasoline and drying thoroughly.

Then heat one gallon of water almost to boiling point, add one tablespoonful of sal soda, and when the solution is lukewarm, scour the hats with it, using a stiff short-haired brush for the coarse braids and a somewhat softer brush for the fine body hats. The scouring will remove the dirt and leave the hats clean, but with a yellow appearance.

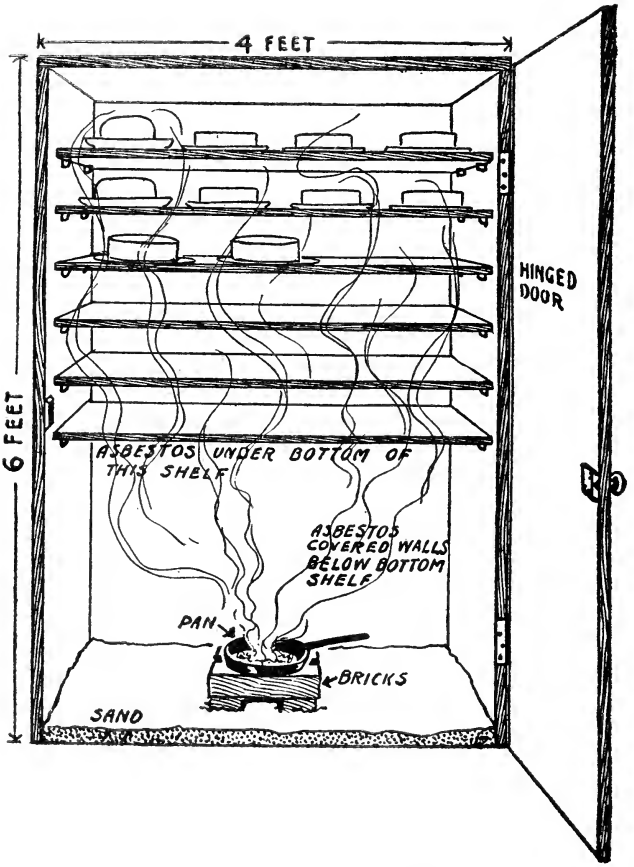
Avoid useless scouring and do not use any more of the solution or of the rinsing water than is necessary, as it should be an object to preserve the original shape of the hat as much as possible. The dirt is nearly always on the surface only, and can be removed with very little scrubbing.

After scouring, rinse the hats quickly in clear water, mop off the surplus moisture with sponge or towel and hang up to drip for half an hour. When they are half dry, they will be ready for the bleaching box.

The Sulphur Box

This should measure about six feet high and four to six feet wide, and should contain shelving or lathes so arranged that you can place 20 or 30 hats in the box at one time without putting one on top of the other. The bottom shelf should be at least 35 inches from the floor, to prevent the box from being set on fire by the flames from the sulphur pan. As an additional precaution tack a thick piece of asbestos paper on the under side of the bottom shelf, and line the sides of the box, as far up as this shelf, with the same kind of paper. The floor of the box should be covered with asbestos or strewn with a layer of sand or soil about one inch deep, and in the center several bricks should be arranged on which to rest the sulphur pan or pot. The box should be made as near airtight as possible, by careful papering on the inside. If possible, do your bleaching in a shed outside your shop, or better still, if your shop contains a built-in closet, convert that into a bleach-box.

If you do your bleaching inside the shop, it is better to light your sulphur just before closing time, so any escaping fumes may be cleared away by morning. First see that the hats are arranged where their entire surface is exposed to the fumes *and where they do not come in contact with nails or other metallic substances.* Then heat an iron frying pan or pot on your stove until it is almost red hot, put a small stick of brimstone or stick sulphur in the pan—a piece about two inches long will be enough—and put the pan in the sulphur box, resting it on the bricks arranged for it on the sanded floor. The pan should be hot enough



FRONT VIEW OF THE BLEACH BOX

to quickly ignite the sulphur, and you must close it up in the airtight box immediately, to avoid inhaling the fumes.

Next morning, open the door of your box and allow the remaining fumes to clear away; then remove the hats, and, if possible, place them in the sunshine for several hours. If any of the hats require stiffening, attend to this next.

Stiffening the Hats

There is a variety of stiffening agents. Some use gelatine, others white glue, others bleached shellac. I have found I get good results from any of the French glues imported into this country. I also use a domestic glue with excellent results. Soak three or four pieces over night in a gallon of water in an enamel vessel. When soft, heat and stir until dissolved, adding to the mixture, while boiling, a small pinch of sugar of lead and three pinches of salts of sorrel. This is for the purpose of bleaching the glue.

Glue should be warm when applied, not hot. Some hats need more stiffening than others, and it is therefore well to apply the glue with a sponge, regulating the application according to the requirements of each hat. Both the upper and under brim are stiffened. On hats that are very flimsy, apply all the glue the fiber will hold. On hats that do not need much stiffening, apply it lightly. In either case, after the hat is glued, squeeze out the sponge and mop off the surplus glue. Then stand the hat on its brim—never hang it up—and when half dry it is ready to be placed in the sulphur box for a second fumigation.

Toning Solution for Unstiffened Hats

The hats that do not need stiffening must be fumigated a second time, together with the stiffened hats. It will be beneficial, however, to treat them with a toning solution before putting them in the sulphur smoke.

In a quart of hot water dissolve a pinch of sugar of lead, a pinch of sal acetosella (or bioxalate of potash) and two pinches of oxalic acid. Sponge the hats with this solution, and in ten or fifteen minutes repeat with cold water.

When these are half dry, they and the hats previously glued are put into the bleach box, the sulphur lighted, and the bleaching process repeated as on the previous night.

The Final Touches

Next morning the hats will be sufficiently moist to put on the blocks. Do not allow them to dry before blocking and pressing. It is best to get the entire lot on the blocks before you start ironing any of them.

After ironing, place them in the sunshine for two or three hours, when they will be ready for the trimmer.

Although somewhat tedious, this process gives the best results, and can be used on all hats except Panamas. These require a somewhat different treatment, which will be explained in the next chapter.

CHAPTER XXII

Bleaching and Stiffening Panama Hats

ONE of the most fascinating and remunerative, yet least understood branches of hat renovating, is the bleaching of Panamas. Thousands upon thousands of Panamas are bleached every year by hat workers of all kinds, but of these only a very small proportion are bleached right, and by a process that does not shorten their life. A really fine hat should give its wearer three or four seasons' use. Oxalic acid baths and most of the prepared "bleaches" will burn up the fiber in a very short time, making it crack easily in handling. The finer the braid, the shorter the life of the hat after it has once been cleaned by an ignorant worker with the use of acids. The "boot-black hatter" is not the only enemy of the Panama. The average "fur hatter" also, who opens up a general repair shop, knows very little of the art of Panama bleaching, and this class of hat renovators ruin many good Panamas by reason of their ignorance, despite their good intentions.

The following process is the best that can be used on Panamas, and is familiar to very few of the hat renovators throughout the country.

Assort the lot of Panamas to be bleached, selecting those with perspiration stains in the brim or crown, to be soaked overnight in gasoline, as was done with the greasy felt hats. Next morning, give all the hats a scrubbing with warm gasoline, paying particular attention to the stained portions of the greasy hats.

After cleaning, allow the hats to become thoroughly dry, either in the sunshine or by the slower heat of a warm room.

When the hats are dry, wash them lightly, in a basin of warm water, in which one tablespoonful of sal soda is dissolved. Do not brush hard, as gentle brushing will remove the dirt. Use a medium stiff brush—too stiff a brush or too vigorous brushing will destroy the enamel. Then rinse the hat in clear water from the hydrant, or run it through a tub of water to wash off the soda and dirt.

When the hats are half dry put them in your bleach box and burn the sulphur as described in the chapter on straw hat bleaching.

Next morning remove them from the bleach box and expose them to the sunshine for several hours.

The hats must now be run through a toning and fixing solution mixed as follows: one-fourth teaspoonful of Sal Acetosella (or bioxalate of potash), one-fourth teaspoonful of sugar of lead and one-half teaspoonful of oxalic acid, dissolved in one gallon of warm water. Immerse each hat in this solution for about one minute, scrubbing *only the stained parts* showing perspiration marks, dye from the ribbon or tannic acid stains from the sweat band, separately and vigorously with a nail brush dipped repeatedly in the solution. When they are cleaned, rinse them thoroughly in clear, cold water to remove the surplus acid from the hats. Then set them aside to dry. After which you may proceed to stiffen them.

Assorting the Hats for Stiffening

Some will need no stiffening, others just a trifle, and some (particularly Toyos and Japs) will be limp as a rag, and will need to be well stiffened. In stiffening both Panamas and Milans that are brought for renovation your good judgment must be constantly exercised. Scarcely two hats require the same amount of stiffening. When stiffening new hats or rather body hats, it is an easy matter to give all the same amount of stiffening and thus turn out all hats uniform. With worn hats, brought to be renovated, it is a different story. Rain and constant handling has left them with different degrees of flexibility; some have been washed with soapsuds or other agents that completely destroy the sizing, and constant care and judgment is necessary to turn out all jobs of an even quality of stiffness, or varied in accordance with the special wishes of the customer.

If the hat is stiff enough for the customer's taste, it should not be further stiffened. If it is too stiff when brought to your place, it should be soaked for five minutes in the sal-soda wash described at the beginnning of this article. Scrub it with a medium soft brush to wash out the stiffening and thoroughly rinse it.

Preparing the Glue

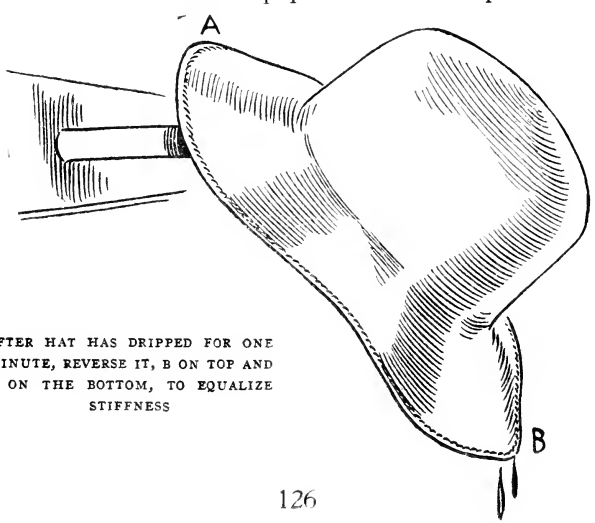
Buy a two-gallon enamel vessel and soak over night three pieces of the finest French glue, or the best quality domestic glue, in one and a half gallons of water. This glue comes in pieces of uniform size. Next morning heat it on the stove and dissolve the glue by repeated stirring until it reaches the boiling

point. Then bleach or whiten the glue by adding one teaspoonful of salts of sorrel and one-half teaspoonful of sugar of lead, stirring this well into the mixture. The glue will then be ready for use.

Stiffening the Hats

Pour the glue, while boiling hot, into an enamel wash basin on your scouring bench. Immerse the softest hat of the lot into the hot glue, covering the whole hat. In about ten seconds remove it from the glue and hang it on a peg where it can drip into the glue basin. Those requiring less stiffening may be left in the glue for a few seconds only, or merely run through the stiffening and immediately hung up. On hats requiring only a minimum of stiffening, apply the glue lightly with a sponge.

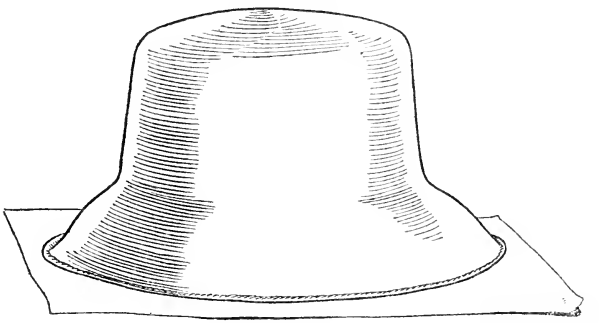
After each hat has ceased to drip, place it on the floor where some clean papers have been spread. The



AFTER HAT HAS DRIPPED FOR ONE MINUTE, REVERSE IT, B ON TOP AND A ON THE BOTTOM, TO EQUALIZE STIFFNESS

brim should be turned down as shown in the cut so that the remaining liquid will drain to the edge of the brim, which should be the stiffest part of the hat.

As the stiffening starts to dry as soon as the hats are taken out of the bath, the hats must be carefully watched from the moment you hang them up until you lay them out to cool and stiffen. After one minute's dripping, every hat should be reversed, B on top and A on the bottom, allowing the glue to drip back to A for two or three minutes. An important feature is to have the stiffening uniform on all sides.



WITH BRIM DOWN, THE STIFFNESS INCREASES AT THE EDGE

If some of the Toyos and Japs are not stiff enough, go over them with a sponge dipped in warm glue.

If some of the hats prove to be too stiff you can wash out the superfluous stiffening with warm water.

After all the hats have been stiffened and have cooled off for about half an hour, but are still damp and moist, place them in your sulphur box for a second fumigation. Next morning when you remove them from the box they will be ready for blocking.

CHAPTER XXIII

Blocking Panama Hats

AFTER stiffening the hats and leaving them in the bleach box over night for the second fumigation, the next process will be blocking.

A Panama should never, under any circumstances, be blocked dry. Generally your hats will remain moist over night, so that when you remove them from the bleach box they will be in just the right condition for blocking. If any should be dry, pass a wet sponge over them before blocking or ironing.

Sometimes, after bleaching all night, a hat will be discovered to be too stiff. A gentle scrubbing with hot water will wash out the surplus stiffening.

Any that are too soft can be made stiffer by applying another coating of glue with a sponge.

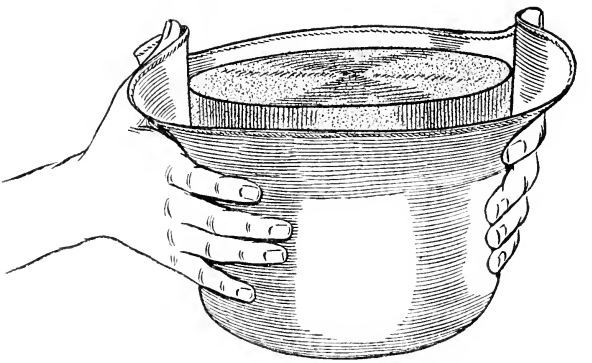
Putting the Hat on the Block

Before slipping the hat over the block, see that the lead pencil mark on the inside of the crown, showing where the ends of the leather were joined and put on the hat when the trimmings were ripped, is directly over the center mark on your block. This assures that the hat will have the correct, original oval when finished.

Pull the hat down over the proper block, and then place the block, crown down, in your oval steamer—the same as used for blocking soft and stiff hats. In a few moments take the hat out of the steamer and

pull it down tightly on the block, working over the crown with the palm of your hand until all wrinkles disappear.

It is nearly always necessary to steam a Panama two or three times before it fits firmly on the block.



HOW TO SEE IF THE PANAMA IS EVENLY ON THE BLOCK

While this is being done the hat should be constantly observed to see that it does not shrink more on one side than the other, and acquire a lopsided effect. The best way to measure this is to first measure the brim to see that both sides are even, and then to press the sides of the brim down flat against the block. Any unevenness that exists will then be apparent in the space between the bottom of the block and the edge of the brim. Front and back should be measured in the same way.

Ironing

Panamas should be pressed or ironed in the same way as soft hats. The fiber will burn easily under a hot iron, and care should be taken that the iron is

cooled sufficiently to do the work without scorching. The temperature can be quickly reduced by dipping the iron in the water in your bench tub or basin. Always iron the hat under a cloth which you have dampened with a sponge.

To press a cord-mark or ridge over the crown of a hat, tack a piece of blocking cord over the block, tacking it front and back and being very careful to get it exactly in the middle. Shrink the hat down over this and the ridge will stay after it is off the block.

After the crown is blocked and ironed, polish it by rubbing with cheesecloth or tissue paper. Then slip the hat off the block, insert the proper band block and flange the hat as you do your soft hats, ironing on the underbrim only.

Sometimes, after bleaching and blocking, the hats will not appear white enough to suit your taste. You can improve the color considerably by filling a small cheesecloth sack (about 4 x 6 inches) with lac sulphur and rubbing it over the hat, so that the powder sifts through, afterward rubbing with a coarse, clean towel and brushing briskly with a dry nail-brush or scouring brush that is not too stiff.

CHAPTER XXIV

Other Bleaching Methods

FOR those who find the foregoing system of Panama bleaching (described in the preceding chapters) too tedious or difficult, the following process may be welcome. While not so permanent in its results as the process just described, it is almost as effective, and may be quite as satisfactory to those who are not very particular.

The Acid Solution

Prepare the hats as you did for the other process, scrubbing them to remove perspiration stains, etc. When thoroughly dry, boil one gallon of water in your basin; then add one teaspoonful of oxalic acid, one-half teaspoonful of sugar of lead, and one-half teaspoonful of bioxalate of potash, also called sal acetosella. Stir and let the solution cool off for a minute.

Then, using your scouring brush, scrub the hats with the solution. As soon as they appear thoroughly clean, immerse them in a tub of clean water and rinse thoroughly, until every trace of acid is removed.

Rinsing is very important in this process, because unless you give the hat plenty of water, a portion of the oxalic acid will remain in the hat, and in a few hours' time it will be fairly started on the road to destruction, becoming more brittle day by day until a crack appears, usually in the brim, and the hat is ruined beyond reparation. In the "hat repairing shops" where cheapness is the sole object, the acid is

usually sponged off lightly, or not at all, and the customer, who thinks he has effected an economy, finds, when the brim cracks in his hand a few days later, that he has really thrown away both hat and money. The responsible renovator owes it to himself and to the trade to educate his customers to the worthlessness of the "cheap" work turned out by the "boot-black hatters," and to the importance of taking good hats to a real hatter and paying him a fair price for the time, knowledge and materials necessary for cleaning the hats without taking the life out of them.

After brushing the dirt from the hats with the solution given above, and thoroughly rinsing them, hang or place them in the sunshine for a time—half an hour, if possible. When they are half dry, stiffen them as described in the other process, and bleach them in your sulphur box over night. The next morning block and finish them. As stated, this process is not quite as permanent as the one previously described, but, on the other hand, it is considerably quicker, the hats entering the bleach box only once, whereas the other process requires the hats to be exposed to the sulphur fumes on two separate nights.

Bleaching Without Sulphur Fumes

Should you desire a shorter and more simple method, and one which does not call for the use of a bleach box, the following will turn out a very acceptable job. I give this process because some shops are so arranged as to make the installation of a bleach box impracticable and because other conditions sometimes make it necessary to get along for a time without this aid.

Separate the hats to be cleaned into three lots: 1—those having greasy perspiration stains around the band-mark; 2—those showing slight grease or oil marks; 3—those simply soiled and showing no grease spots.

Soak lot No. 1 in gasoline over night. Next day brush them vigorously with gasoline while still wet, never allowing them to dry from the time you place them in the gasoline until you are through scouring. When these are completed, start to clean lot No. 2, scrubbing them with gasoline to remove perspiration marks and grease spots.

The difference between lots No. 1 and No. 2 is that the hats are less greasy and not so deeply stained and do not need the all-night soaking in gasoline to remove the grease.

When lots No. 1 and No. 2 are thoroughly cleaned the last of the greasy hats will have been disposed of, and these, as well as lot No. 3, will need to be washed in the oxalic solution before stiffening and blocking.

First hang up to dry the hats that you have washed in gasoline. When thoroughly dry begin your scouring with the solution of oxalic acid, bioxalate of potash and sugar of lead previously described, being careful not to scrub harder than is absolutely necessary to remove the dirt, as there is danger of scrubbing off the enamel or coat of the fiber.

Always start this washing with lot No. 1, following in order with No. 2 and No. 3. The hats that are in worst condition should be washed first.

The precautions given before to rinse thoroughly, in clear water to remove the injurious acid, must be observed in this process also.

After rinsing expose the hats to the sun for about half an hour, and when they are nearly dry stiffen those that require it, after which, while they are still moist, steam them over the blocks and iron them as already described.

After the hats are blocked and ironed a special liquid bleach must be applied.

Take two teacupfuls of lac sulphur and the same amount of flowers of sulphur and mix the two together thoroughly in a large china vessel with both hands, crushing and pulverizing the lac sulphur between your fingers until no more lumps appear.

Add water to this mixture a little at a time, continuing to knead and crush the two sulphurs until both are thoroughly mixed and you have a liquid of the consistency of molasses. Mix with your bare hands, making sure that they are thoroughly clean before you begin.

With the quantity of sulphur given above, you should have enough bleach for about fifty hats. Apply this with a sponge or a short-haired stencil brush after the hat is ironed, briskly rubbing it to and fro over the crown. Use as little as possible, afterward following up the brush with a sponge dipped in water and squeezed nearly dry, so as to spread the bleach thinly and evenly over the surface.

Any hats requiring to be creased into fedora or telescope shapes should now be removed from the blocks and shaped with the fingers while they are still moist. Then set all the hats aside to dry—in the sunshine if possible.

When the bleach is dry on the crown, iron the brim under a damp cloth and press a sharp band-mark into

the hat where the brim joins the crown. Then apply the sulphur wash to the underbrim as you did to the crown, allow it to dry, apply the wash to the upper brim, and set the hat out in the sunshine until thoroughly dry all over. If the hats are too white from putting the paste on too thick, go over them briskly with a clean, moist sponge, washing off some of the paste, and place in the sunshine again to dry.

Next the dry powder must be brushed off. Do this with a perfectly dry scouring brush, creating as much friction as possible and producing a gloss over the entire hat. Finish by rubbing with a clean, dry Turkish bath towel, kept purposely for this work.

This process gives the beautiful creamy white finish so desirable on the genuine South American Panamas. On the pure white hats, known as Japanese Panamas, frequently worn by women and sold in department stores and millinery shops, another lot of paste, mixed in a separate china vessel, should be used. This bleach should be the same as that just described, except that the flowers of sulphur are omitted, only lac sulphur being used to make the paste.

These two formulas are apparently quite simple, but until you become expert in their use a great deal of patient experimenting will be necessary before you can turn out the best possible results. You must continually use your good judgment as to how little of the paste to use on your brush, how hard to rub it on the hat, how to spread it, and mop up the surplus bleach with the nearly dry sponge, and how to keep it at its proper syrup-like consistency.

When you have become sufficiently skillful in the mixture and application of this formula, you may

progress to a more complicated, but without doubt the most wonderful and harmless liquid bleach ever used on a Panama hat. In fact, I use it on all the Panamas I bleach even after I have exposed them to the sulphur fumigation.

The Best Liquid Panama Bleach

Soak two tablespoonfuls of gum tragacanth for at least three days in a quart of water. Then dissolve it by heating gradually to the boiling point, stirring until there are no more lumps and the whole takes the consistency of thin mucilage. Then set the mixture aside to cool. When cold, add about a pint of lac sulphur, crushing it with your hands until all lumps are dissolved. Then put on your heater a half pint of water in which a tablespoonful of white glue has been soaked over night. While it is heating, keep stirring until the boiling point is reached. Then let it cool for fifteen minutes, after which it is added to the already prepared solution of gum tragacanth and lac sulphur. Mix it thoroughly with your hands until the whole preparation has the consistency of liquid shoe polish. In mixing the various ingredients be sure your hands are thoroughly clean.

The bleach is now ready for use. After the hat is blocked, apply it very thinly with your stencil brush, squeezing out the brush, rubbing the bleach well into the hat, and spreading a very little over as large a surface as possible. Finish by rubbing well with a nearly dry sponge.

Apply the bleach to the crown, the upperbrim and underbrim, in order, letting each dry before going on to the next. After the entire hat is covered with the preparation, and has been allowed to dry thoroughly

in the sunshine, brush as before with your dry scouring brush. You will observe that very little sulphur brushes out, and the hat quickly takes on a highly polished appearance. Follow with your dry Turkish towel, rubbing vigorously to remove any loose sulphur from the surface, so that no powder will remain to brush off on the clothes of the wearer after the hat is delivered.

As stated, this is by far the best liquid Panama hat bleach. The secret of success in its use lies in applying it as sparingly as possible and spreading it as far as it will go, always brushing it well into the fiber with the stencil brush and following with the nearly dry sponge. Do not brush too hard after the hat is dry. Improved results can often be obtained by dusting some dry lac sulphur over the hat just before the final brushing and polishing. This is done by putting the sulphur in a small bag made of a double thickness of cheesecloth, tied at the top, and rubbing the bag over the hat before taking it off the block. Care must be taken that the hat is dry before this is done.

CHAPTER XXV

Renovating Women's Straw Hats

FOR the man who has gained experience in renovating men's hats, and who is willing to put further effort into the renovation of women's hats, a department for the latter holds promise of big returns. A number of men's renovating establishments go after this trade, but the majority neglect it.

One men's hat store having a renovating department, and which recently installed a woman's department, cleaned and reblocked nearly 1,000 hats in the month of March, at a minimum charge of $1.50 each. This business, of course, was promoted by enterprising methods, and special attention to this branch.

Plan for a Special Women's Department

The rear of the store was partitioned off into a small room for the exclusive use of women patrons. Special attention was paid to the lighting, and to a convenient arrangement of mirrors. Around the room were placed a number of shelves, and on these were kept displayed about fifty hemp and milan hats, untrimmed, all the smartest and best models of the season. When the woman customer entered she was shown to the women's department, where a courteous attendant received her and invited her to try on any of the displayed shapes she liked. She was informed that her old hat could be made over into just the style and shape she selected. This store got its customers by billboard advertising announcements in the daily

papers, and by sending a woman demonstrator out to various local stores and factories.

How to Proceed with Women's Work

Should you decide to conduct a women's hat renovating department in conjunction with such a department for men, it will be wiser at the beginning to restrict your efforts to the simpler features of the trade, such as the bleaching and reblocking of Panamas; the cleaning and reblocking of felt body hats; the bleaching of fine milans and leghorns, and split braids of the more staple shapes. The more delicate hats, hemp, lace, Tagal braids, satins and velvets, are best left alone until practical experience in the more simple work lends ingenuity for the more exacting. To undertake the making over of the more delicate hats in the beginning would hardly prove successful.

Neither is it advisable for the beginner to attempt work in the various freak shapes which spring up. Staple shapes and a few smart, seasonable styles will prove a safe and sound policy. It is estimated that 1,000 freak shapes in hemp and soft straws are introduced each season, and to purchase all of the blocks and flanges necessary to cover even part of this number would be a waste of money. Many of the Panamas, felts, leghorns and milans for women are blocked on mannish blocks; and by ordering a size 7½, 7¾ or 8 inch alpine, and the same in a flat or half round top, you can cover almost the entire field. The various telescopes can be produced on the alpine block by blocking while still hot, telescoping to any desired height.

For any other blocks you may desire, it will be ad-

visable to have your name placed on the mailing lists to receive the fashion plates of the several block makers, especially those in New York, where many of the season's newest shapes originate and where blocks for only accepted style shapes are made. In this connection, it will also pay you to get in touch with some milliner in your town and consult her on the styles for the season. Do not buy too many of the prevailing shapes or "leaders." In women's headgear styles change quickly, and to-day's "leader" may be to-morrow's frost.

How Women's Hats are Renovated

In remodeling women's Panama hats, Leghorns and Milans, almost the same methods are used as are followed in renovating men's Panamas; with the exception that, owing to the width of the brim and to the inferior quality sold by milliners and department stores, women's Panama hats will require more stiffening.

In women's straw hats, the nature of the braid is such that great difficulty is sometimes experienced in ripping the hat so that the braid can be used in its original form. For this reason it is always advisable for the renovator to try and induce the customer to have her hat remodeled into a shape as nearly like the old hat as possible. If she consents this will obviate the necessity of ripping either entirely or in part. With such braids as chip, split and fine Milan it is next to impossible to rip the hat. But in the case of cotton braids, hemp, Sisal and the heavier and more firmly woven straw braids, it is quite practical to ravel the hat completely and use the braid over again in its original form, stitching it yourself.

How the Ripping Is Done

In starting to rip a hat bear in mind that all hats are sewed from the crown, or button, out to the brim, and that the nature of the stitch is such that the thread must be grasped from the point last sewn, and from there ripped back. Hats are sewn with a single thread chain stitch, which makes ripping a simple operation if you begin properly. First find the end of the thread, then loosen it and pull on the loosened thread end. You will likely find it running back smoothly to the "button." Should any difficulty arise from the sizing, the ripping process may be facilitated by immersing the hat in warm water or by use of a steamer. This will loosen the glue or sizing and make ripping comparatively easy. The hat is then resewn on a plaster paris block of the required shape. Several sewing machines for sewing hats are on the market, most all of them including a complete instruction book telling exactly how the sewing is done. After investing in a machine, if you haven't one, study the instruction book and practice on old hats until you become proficient before attempting to sew hats for the trade.

Sizing the Hat

After the hat is sewn the next step is sizing. There are two distinct methods of sizing. One is by use of glue or gelatine, and the other by use of shellac. The glue sizing is the more practical and is the cheaper of the two. The glues and gelatines can be purchased from firms in New York, Chicago and Boston making a specialty of sizings for the manufacture of straw hats.

The mixtures for straw hats are, using as the zero mixture, a solution of one ounce of glue to one quart of water. This will make a very thin sizing. A larger amount of glue should be used where more stiffness is desired. In sizing light and white hats it will be necessary to bleach the glue. This is done by adding a teaspoonful of either oxalic acid, salts of tartar or sugar of lead to one gallon of mixed glue. It must be remembered that this bleaching of glue has a tendency to hurt the hat, and great care must be exercised not to get too much acid into the mixture.

Two processes of sizing hats are as follows:

Process No. 1:

The hat is dipped in a quantity of the solution mentioned in the foregoing and is allowed to dry. No particular attention as to the shape is required at this stage of the work. Where quick results are desired the hat is sometimes dried with heat, but the best method is atmospheric drying.

Process No. 2:

The hat is placed on a plaster paris block of the desired shape and covered with the sizing described. It is allowed to remain on the block until nearly dry, when it is removed for further operation.

The process of shellac sizing is similar to that described above, and the sizing, as with glue sizing, can be applied either by the dipping or the painting method In either case the hats are handled in the same manner.

Hats made of pyroxaline or hair braid are sometimes sized with banana oil. The method of using the oil is similar to that of applying any other sizing.

However, the use of this sizing is not advised, for the reason that banana oil is very pungent and many find it offensive.

Blocking

The next step is the blocking. This is done in the factory on a hydraulic press. When such a press is not available, however, the hat can be blocked over a plaster paris block by ironing with a hand flat.

After the hat is blocked it is covered with a coat of shellac or varnish. Where a brilliant lustre is required on white or light-colored hats, the hat should be shellacked with white French varnish or white shellac.

Women's beavers, velours and felt body hats are cleaned and finished by the same process used for similar men's hats. Satin and velvet hats are cleaned by soaking them over night in clean gasoline and rubbing with soft cotton while in the gasoline. A brush must never be used on these hats. White satin hats cleaned by the gasoline process should be sprinkled with white talcum powder and the talcum well rubbed in with a piece of clean white cotton. Polish afterward with a clean towel or piece of cotton.

Women's Milans and split braids can be beautifully dyed by applying to them with a brush one of the many cold dyes on the market. Some of the manufacturers of these dyes will send you a color card showing the various colors and shades. If you have a demand for this kind of work it will be well for you to get one of these cards each season.

CHAPTER XXVI

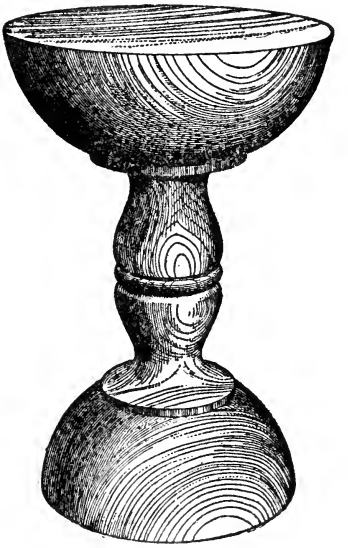
Ironing, Washing and Blocking Silk Hats

THE hat renovator in a small town is seldom called upon to iron or block silk hats, for the reason that few silk hats are worn in small towns. In the larger towns, however, the silk hat is popular, there being many occasions when it is worn, especially Sundays at church. The renovator equipped with the knowledge necessary to renovate a silk hat and who is capable of doing it in satisfactory manner, can make many an extra dollar in any fair-sized town by devoting attention to this feature of the renovating business. A silk hat to look nice must be ironed at least once a month if it is worn much, so you see the opportunity which this branch of the renovating business affords.

All that is necessary for silk hat work in a small town is a sponge, silk hat penetrating brush, hot iron and a silk hat brim brush; but in the larger cities it is advisable to purchase a potance frame, two or three different style potance blocks—one almost straight; one medium bell crown, and one full bell crown. Some potance blocks are made with one side slightly belled and the other with a deeper bell. An iron silk hat tolliker or potance iron and a wooden tip stand are also necessary.

It should not take over twenty minutes to iron a silk hat. First brush the brim thoroughly with your silk hat penetrating brush, making sure that all of the dust is removed. Sponge the underbrim with a

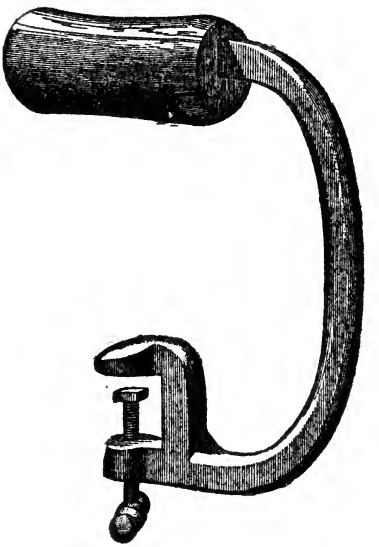
cotton wad dipped in gasoline. *Rub one way only.* This process imparts gloss and lays the nap. As



WOODEN TIP STAND

gasoline evaporates rapidly, the hat dries quickly. When dry, brush again with the penetrating brim brush and shake all the dust out of the crown, brushing it with a silk hat brush. Then take a pad made of the silk cover of an old umbrella, hold it against a very hot iron, and then run the hot pad quickly over the hat, in the direction of the nap only. The hot silk pad produces the necessary lustre. By placing the hat on your tip stand, you can spin a perfect center to the tip by running the hot silk pad over the same. After the hat has been thoroughly brushed, the hot silk pad rubbed thoroughly over the tip, sides and

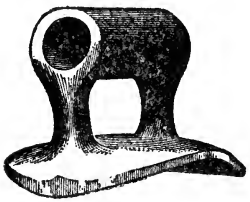
upper brim, so that no streaks appear, and that hat has a perfect lustre or polish, you must then sponge the binding and underbrim with your hot sponge.



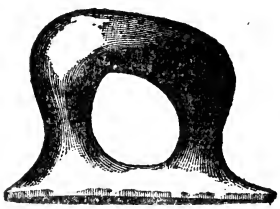
POTANCE FRAME AND BLOCK

BLOCKING SILK HATS

Should it become necessary for you to block a silk hat in order to remove a dent or break, the procedure is as follows: Dampen on the inside *under the dent or break only.* Then attach the potance frame to your bench, adjust on the frame the potance block that corresponds with the crown of the hat, turn the sweatband outward and lay the crown on the block. Then brush the nap one way, and iron over the break several times slowly until the break is cold and disappears. Be careful to use clean irons and not to have them



POTANCE IRON



FLAT IRON

too hot. A regular silk hat lure for brushing and stretching the nap is preferable to a brush. The moisture on the inside of the hat and the heat on the outside melts the shellac and mends the break.

CLEANING SPOTS ON SILK HATS

To remove spots from the plush apply a minimum of alcohol and brush vigorously with the lure until dry; then iron. When a hat is exceedingly soiled, first brush thoroughly and then sponge with a clean sponge dipped in water containing ten drops of ammonia to a tumbler of water. After sponging, brush vigorously with the stiff penetrating brush, and sponge again with the same sponge squeezed out thoroughly. Let the hat dry before placing it on the potance block. After it is on the block, brush hard with dry penetrating brush until all streaks disappear. Then iron until the natural gloss returns and proceed to polish as in ironing.

The reblocking and recurling of silk hats, making them over into the latest styles, cannot be mastered by a beginner. This is a trade in itself and should be left entirely to the silk hat manufacturer. A little practice, however, will enable the beginner to do a

creditable job at ironing, washing and blocking. The trimming of silk hats is also best left to the manufacturer. He has made a study of the art and understands it.

Renovating Opera Hats

There is not a great deal that can be done with an old or broken opera hat—the folding kind, made of silk stretched on a frame. One that is merely dusty or worn-looking, however, can be improved 100 per cent. by holding it over live steam for a few seconds and sponging it with a hot, damp sponge.

WHATEVER YOU NEED WE HAVE!

Here is a partial list of the articles we carry in stock for the hat trade:

Army Trimmings
Band Blocks
Block Strap
Bleaches
Bombazine
Bow Ties
Bow Braid
Blocking Cord
Bottom Board
Brim Iron
Brim Plane
Brim File
Brushes
Buckles
Cloth Bands
Cords
Corrugations
Curling Board
Cleaners
Conformateurs
C. W. Telescoper
C. W. T. Punches
Cork Ventilators
Curler's Gas Stove
Conformo Gas Stove
Curlers Press
Curling Machine
Combination Curling Shackle
Dyes
D'Orsay Shackle
Duck Bill Tolliker
Eyelets
Eyelet Punches
Electric Clutch
Fancy Bands
Flat Iron Tolliker
Foot Tolliker
Front and Rear Tolliker
Formillion
Flanges (Ladies and Men's).
Flange Stand
Finishing Bench
Finishing Powders
Groove Tolliker
Gold Paper Initials
Hatters Irons
Hat Bands
Hat Sweats
Hat Pads
Hat Blocks
Hat Guards
Helmet Trimmings
Heart Tolliker
Hinge Shackle
Iron Stands
Initials
Initial Punch
Jersey Shackle
Luers
Leathers
Luering Stoves
Mourning Bands
Muslin
Metal Initials
Military Cords
Opera Hat Silk
Oil Silk
Oil Silk Lips
Potance Block
Potance Frame
Potance Iron
Pouncing Paper
Pin End Hat Guards
Plush
Puller Down
Reeds
Rubber Tolliker
Runner Down
Spring Rounding Jack
Slide Rules
Shackles
Satin
Set Sticks
Stretch Blocks
Size Rings
Size Tickets
Size Reducers
Stoves
Size Marks
Sewing Silk
Slides
Stickers
Sanitary Sweats
Silk Elastic Bands
Slip Stick
Stiffeners
Spinner.
Telescope Blocks
Tip Stands
Tissue Caps
Tollikers
Ventilating Punch
Wire Cards

Roberts, Cushman & Company

Executive Offices and Salesroom

10 Washington Place, New York City

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9 Washington Place
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The Beginners' Outfit includes the following:

4 Soft Hat Blocks
4 Panama Hat Blocks
4 Soft Hat Flanges
4 Panama Hat Flanges
4 Band Blocks
1 Flange Stand
1 Runner Down
1 Puller Down
1 Slip Stick
1 Spinner
1 Skein Blocking Cord
1 Foot Tolliker
1 Heart Tolliker
1 Hatters' Iron
1 Round Shackle 5/8"
1 Retailers' Penetrating Brush
1 Soft Hat Finishing Brush
1 Size Ring
1 Dusting Brush
1 Stretch Block
1 Box Hat Pads
3 Dozen Oil Silk Lips
¼ Gross Sanitary Sweats for Panamas
½ Gross Sanitary Sweats for Soft Hats
1 Gross Stickers
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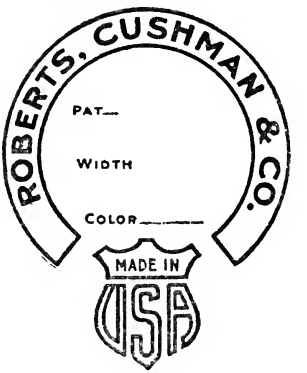

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